Residential New Construction Attitude and Awareness Baseline Study

Real Estate Appraiser Survey

Report on Findings

Prepared for the New Jersey Residential New Construction Working Group

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Executive Summary

This Report presents the findings from the Real Estate Appraiser Survey for the New Jersey Residential New Construction Awareness and Attitudinal Baseline Study (RNC study). A summary report, entitled *Residential New Construction Attitude and Awareness Baseline Study-Integrated Summary: Report on Findings*, consolidates information from this and other research conducted for the RNC Study.

A. Background

The New Jersey Residential New Construction Working Group (Working Group), which consists of Public Service Electric &Gas Company, GPU Energy, Conectiv Power Delivery, NUI Elizabethtown Gas Company, South Jersey Gas, Rockland Electric Company, and New Jersey Natural Gas Company, is charged with developing and implementing a coordinated, statewide utility residential new construction program that will increase the energy efficiency of new homes constructed in New Jersey. In support of that effort, the Working Group has commissioned a comprehensive study of New Jersey's residential new construction market with the following goals.

- *Baseline Measurement*: The primary objective of the study is to establish a baseline that documents the current market for ENERGY STAR homes.
- *Program Design and Implementation*: The secondary objective of the study is to enhance the Working Group's understanding of the residential new construction market.
- *Customer Sited Clean Generation*: In addition, this study will support the work of the Customer Sited Clean Generation Working Group (CSCG Working Group).

The Working Group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study. The purpose of the Real Estate Appraiser study is to obtain information on the current and potential roles of appraisers in encouraging the construction of energy efficient homes. In phase one, we collected background information on licensing and training of appraisers. In phase two, we conducted 57 interviews with appraisers who work in the residential new

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construction market in New Jersey. We restricted eligibility for the survey to appraisers with at least five years of experience, at least 50 appraisals in 1999, and at least five new home appraisals during 1999.

B. Awareness and Attitudes Findings

The primary goal of the Appraiser Survey is to establish a baseline against which market changes resulting from the utilities' residential new construction program can be measured. To meet this goal, the survey collected information on awareness of and attitudes toward the ENERGY STAR Homes program and the existing utility residential new construction programs. The awareness and attitude findings include the following.

- *Awareness of Existing Programs*: About one-fifth to one-fourth of appraisers are aware of each existing utility program and about half of the appraisers have heard of at least one existing utility program. Very few appraisers are aware of the Federal Environmental Protection Agency's (EPA) ENERGY STAR Homes program.

- *Awareness of Program Requirements and Benefits*: Most appraisers characterize RNC program homes as energy efficient homes that have lower energy bills. Very few are aware of the existing utility programs' home rating requirements or think of the homes as offering homeowners any other benefits.

- *Inclusion of Energy Efficiency in Appraisals*: Only 14% of appraisers usually discuss energy efficiency with the builder's representative. In assessing energy efficiency, appraisers tend to focus on insulation R-values, window efficiency, and in some cases equipment efficiency.

There is a moderate, but apparently superficial, level of awareness of the existing utility residential new construction programs. Appraisers do not appear to be very knowledgeable about energy efficiency.

C. Appraiser Perceptions of Builders and Lenders

The second purpose of the Appraiser Survey is to help to improve program design by enhancing the Working Group's understanding of

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how the residential new construction market works and of the barriers and opportunities for the ENERGY STAR Homes Program.

1) *Builder Practices*: Appraisers perceive that home appearance gets the most attention from builders. Though builders pay more attention to other construction attributes in the more expensive market segments, appraisers perceive that energy cost does not get much attention from builders in any market segment.

2) *Builder Knowledge of Energy Characteristics*: Appraisers perceive that builders can usually furnish information about the R-value of the insulation in homes, and can usually or sometimes furnish information on AC equipment sizing, windows e-values, basement insulation, and programmable thermostats. They report that builders are less likely to be able to furnish information on air infiltration rates, duct tightness, and equipment efficiency.

3) *Lender Attitudes*: Appraisers perceive that, compared to other cost factors such as taxes and insurance, lenders do not rate energy costs as important in valuations. About 40% do believe that lenders would value an ENERGY STAR certified home higher than a comparable home that was not certified.

D. Recommendations for RNC Programs

Appraisers were asked about their perceptions of the best strategies for reaching consumers and were asked to suggest what type of training they would find most useful.

1) *Who Influences Homebuyers*: Appraisers believe that builders, the experiences of other homebuyers, and real estate agents influence the decisions of new homebuyers.

2) *What Messages Influence Homebuyers*: Appraisers perceive that dollars and cents messages would have the greatest influence on homebuyers, but there was no consensus regarding the most effective vehicle for getting that message to homebuyers.

3) *How Should Appraisers Be Trained*: The survey shows that most appraisers regularly receive training but that few have

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ever received training on energy efficiency. It also shows that most appraisers think that training on energy efficiency programs would be at least somewhat helpful and that the utilities should offer this training directly to appraisers.

In combination with the findings from the other RNC surveys, these findings may help to guide the utilities' RNC marketing efforts.

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II. Introduction

The purpose of this report is to furnish information on the findings from the Real Estate Appraiser Survey for the New Jersey Residential New Construction Awareness and Attitudinal Baseline Study (RNC study). This report furnishes background information on the survey, an overview of the survey methodology, baseline statistics on ENERGY STAR awareness and attitudes, appraiser perceptions of other market actors, and appraiser recommendations on market transformation strategies. A separate report presents detailed information on the survey methodology. A summary report consolidates the information from the series of research tasks conducted for the RNC Study.

A. Background

The New Jersey Residential New Construction Working Group (Working Group), which consists of Public Service Electric &Gas Company, GPU Energy, Conectiv Power Delivery, NUI Elizabethtown Gas Company, South Jersey Gas, Rockland Electric Company, and New Jersey Natural Gas Company, is charged with developing and implementing a coordinated, statewide utility residential new construction program that will increase the energy efficiency of new homes constructed in New Jersey. In support of that effort, the Working Group has commissioned a comprehensive study of New Jersey's residential new construction market with the following goals.

- *Baseline Measurement*: The primary objective of the study is to establish a baseline that documents the current market for ENERGY STAR homes against which market changes can be measured.

- *Program Design and Implementation*: The secondary objective of the study is to enhance the Working Group's understanding of the residential new construction market and to identify the opportunities and barriers associated with market transformation efforts.

- *Customer Sited Clean Generation*: In addition, this study will support the work of the Customer Sited Clean Generation .

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(CSCG Working Group) in its efforts to understand the market for CSCG technologies.

The Working Group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study. The study consists of 13 research components:

- Nonparticipating Homebuyer Study
- Participating Homebuyer Study
- Nonparticipating Homebuilder Study
- Participating Homebuilder Study
- Lender Study
- Residential Real Estate Appraiser Study
- Residential Real Estate Agent Study
- Building Inspector Study
- Trade Ally Study
- CSCG Analysis
- Residential New Construction Statistics
- Affordable Housing Organizations
- CSCG Industry Statistics

The 13 research tasks were conducted independently, since each required research and interviews with different market actors. However, all of the studies used common language and definitions so that the results are comparable across market sectors.

B. Study Goals and Objectives

The purpose of this study is to obtain information on the current and potential roles of appraisers in encouraging the construction of energy efficient homes. The study achieves this goal in three ways.

1) *Background Information*: The project team collected background information on licensing and training of appraisers from the New Jersey Board of Real Estate Appraisers and from in-depth interviews with appraisers.

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2) *Baseline Attitudes and Awareness*: To measure baseline awareness of and attitudes toward the ENERGY STAR homes program and the existing utility-sponsored Residential New Construction programs, the survey asked appraisers to discuss their awareness of and experience with these programs.

3) *Understanding the Residential New Construction Market*: The survey developed additional information on the residential new construction market to assist the utilities in their market transformation efforts. The survey asked appraisers to furnish insights into appraisal procedures, builder and lender practices, and the most effective ways for utilities to promote energy efficient new homes to homebuyers.

The study also supported the work of the CSCG Working Group. The survey asked appraisers questions regarding their awareness of and attitudes toward CSCG technologies.

C. Target Population

Appraisers play a significant role in the residential new construction market because they are responsible for determining the value of a home. In the appraisal process, they work with a number of different residential new construction market actors and have the opportunity to assess the construction quality and energy efficiency of new homes. As such, they are well positioned to assist the Working Group in understanding the existing homebuilding and residential valuation procedures, and to discuss market barriers to energy efficient homes.

However, not all appraisers are part of the residential new construction market. The New Jersey Board of Real Estate Appraisers reports that there are about 2,500 licensed appraisers. Data from the Department of Community Affairs show that there are about 30,000 new homes constructed and sold each year. Our survey shows that appraisers who appraise newly constructed homes appraise an average of 42 new homes each year. That suggests that fewer than one-third of appraisers conduct valuations of new homes.

In the Real Estate Appraiser Survey, we interviewed appraisers regarding their awareness of and attitudes toward existing and potential residential new construction programs. To ensure that we talked to appraisers who were familiar with the residential new

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construction market, we restricted eligibility for the survey to those with at least five years of experience, at least 50 appraisals during 1999, and at least five new home appraisals during 1999.

D. Study Methodology

The study consisted of 57 telephone interviews with qualifying appraisers working in the residential new construction market in New Jersey. In designing and conducting this study, we attempted to establish an appropriate balance among data quality, timeliness, and cost. We are confident that the procedures we used will furnish reliable information to the Working Group. However, it is important for data users to understand the procedures employed and any limitations resulting from the procedures that were selected. Since this is a baseline study, any subsequent study that attempts to measure a change in the residential new construction market must use similar procedures to ensure that measured changes are defensible.

The *Real Estate Appraiser Survey Methodology Report* furnishes detailed information on the survey. The following are the most important aspects of the design and implementation of the survey.

- *Sample Frame*: The sample frame for this study was a commercially available list of appraisal offices.

- *Sample Selection*: We selected a PPS sample of offices. The measure of size for the PPS sample was the number of employees in the office.

- *Respondent Contact*: We sent an advance letter to sampled offices describing the purpose of the survey and the qualifications for an eligible survey respondent. We contacted the office gatekeeper by telephone and asked the gatekeeper to nominate an appraiser in the office who met the survey eligibility criteria. We contacted the nominated appraiser and conducted a telephone interview.

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- *Interview*: The interview was administered by a Computer-Assisted Telephone Interviewing (CATI) system. The average length of the interview was 34 minutes.

- *Incentive*: Each respondent was sent a $25 check for participation in the interview.

The study attained a 62% response rate.

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III. Baseline Awareness and Attitude Measures

The primary goal of the Appraiser Survey is to establish a baseline against which market changes resulting from the existing utilities' residential new construction programs can be measured. To meet this goal, the survey collected information on awareness of and attitudes toward the ENERGY STAR Homes program and the existing utility residential new construction programs. In this section, we identify the key awareness and attitude measures, and furnish baseline statistics on their current levels.
The survey findings demonstrate that some appraisers are aware of the existing utility residential new construction programs but that few are knowledgeable about these programs. Moreover, appraisers do not appear to have a good understanding of what makes a home energy efficient and of the range of measures that contribute to energy efficiency in homes.

A. Awareness and Attitude Measures

Three New Jersey electric utilities have had residential new construction programs; GPU Energy's Good Cents program, Conectiv Power Delivery's ENERGY STAR Homes program, and PSE&G's EEH Five Star Program. Each program had different goals, objectives, and procedures. As a result of restructuring legislation, all of New Jersey's electric and gas utilities are participating in a coordinated, statewide residential new construction program. The new program will have a common set of goals, objectives, and procedures. In the baseline survey, we measure awareness of and attitudes toward the existing programs. In any follow-up research, one would measure the change in awareness and attitudes resulting from the implementation of the statewide program.

In the survey we measured awareness separately for each of the three existing utility programs and for the national ENERGY STAR Homes program. We measured awareness at three levels.

1) *Awareness of Program*: the appraiser's awareness of the named program.

2) *Awareness of Program Requirements*: knowledge of how a home qualifies for the named program.

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3) *Awareness of Program Benefits*: the knowledge of benefits that the named program delivers to homeowners.

These measures inform us about awareness of the existing utility programs and their depth of knowledge about these programs.

It is difficult to get a direct measure of appraisers' attitudes toward existing utility residential new construction energy efficiency programs. Other market actors can express their attitudes toward the RNC programs by choosing to recommend the programs to their customers (agents) or by choosing to build program-certified homes (builders). An appraiser can directly express a positive attitude toward the program only by increasing the value of a home certified by one of the RNC programs. Since only a small number of appraisers have appraised an RNC program home, we identify alternative attitude and knowledge measures, such as:

1) *Discussion of Energy Efficiency with Builders*: how often appraisers actively discuss the energy efficiency of a home with a builder.

2) *Key Measures of Energy Efficiency*: appraisers identify the key indicators that they use to determine the energy efficiency of a home.

These measures tell us whether appraisers regularly consider energy efficiency and are knowledgeable about energy efficiency.

B. Baseline Awareness Measures

The baseline awareness measures show that some appraisers are aware of the existing utility residential new construction energy efficiency programs but have little understanding of the program procedures and objectives.

Table 2.1 summarizes awareness of each existing utility program, awareness of the EPA ENERGY STAR Homes program, and awareness of any of the four programs. Each of the existing utility programs is known by about one-fourth of the appraisers. (*Note: The existing differences in awareness among the three utility programs are not statistically significant.)* Very few (just 2 out of 57) are aware of the EPA's ENERGY STAR Homes program, even though homes in the PSE&G and Conectiv programs meet EPA ENERGY STAR

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Homes requirements. More than half of the interviewed appraisers (53%) are aware of at least one of the four programs.

Table 2.1: Program Awareness

Response	Program Sponsor				
	Conectiv	GPUE	PSE&G	EPA	Any Program
Aware	23%	18%	28%	4%	53%
Not aware	77%	82%	72%	96%	47%

Table 2.2 summarizes appraisers' perceptions of how a home qualifies for an existing utility residential new construction program. The response to this question gives us some indication of the depth of knowledge about the existing utility programs. Most appraisers responded "don't know" or gave a response that was not specific enough to be categorized into one of our three target response categories. Few appraisers knew that the homes go through a formal certification process.

Table 2.2: Awareness of Existing Utility Program Requirements ***(Appraisers Aware of Program)***

Response	Program Sponsor		
	Conectiv	GPUE	PSE&G
Energy efficient	8%	10%	19%
Inspected by rater	0%	0%	13%
Certified by utility	31%	20%	13%
Other	46%	10%	19%
Don't know	15%	60%	44%

Table 2.3 summarizes appraisers' perceptions of the benefits that program homes deliver to homeowners. Most are aware that the homes have lower energy costs than other homes. Very few mention any of the other attributes that are highlighted by the ENERGY STAR Homes program. However, since appraisers are not usually involved

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in marketing homes to consumers, this lack of awareness may not be very important.

Table 2.3: Awareness of Existing Utility Program Benefits *(Appraisers Aware of Program)*

Response	Program Sponsor		
	Conectiv	GPUE	PSE&G
Reduced energy costs	62%	40%	75%
Lower maintenance costs	0%	0%	6%
Higher resale value	0%	0%	6%
Environmentally friendly	8%	0%	0%
Greater comfort	15%	0%	0%
Less noise	8%	10%	6%
Other	23%	10%	19%
Don't know	8%	50%	6%

An appraiser would be likely to have more complete information about existing utility residential new construction energy efficiency programs if he or she had received the information directly from the sponsoring utility. Table 2.4 summarizes the source of information about these programs. The two major sources of information are utilities and media advertisements. For each existing utility program, at least half of the appraisers have obtained information on the program from one of these two sources. It is clear, however, that no a consistent message is being delivered to appraisers regarding the existing RNC programs.

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Table 2.4: Source of Information on Existing Utility Program *(Appraisers Aware of Program)*

Response	Program Sponsor		
	Conectiv	GPUE	PSE&G
Utility company	8%	30%	19%
Real estate agents	8%	0%	6%
Builder or contractor	8%	0%	31%
Retail displays or sales staff	0%	0%	6%
Media advertisements	23%	50%	6%
Media articles	0%	10%	0%
Trade association	0%	0%	0%
Personal sources	0%	0%	6%
Other	46%	0%	13%
Don't know	8%	10%	13%

In summary, more than 50% of appraisers are aware of at least one of the existing utility residential new construction energy efficiency programs, and some are aware of more than one program. Appraisers do not appear to have a very good understanding of how the programs work or what benefits the programs deliver to customers.

C. Baseline Attitude Measures

The baseline attitude measures show that, as a group, appraisers do not focus on the energy efficiency of new homes and have a limited understanding of how to measure energy efficiency.

To assess the energy efficiency of a home, appraisers would need either to get detailed information about building specifications, or to conduct certain tests to measure energy efficiency. In the survey, we asked appraisers how often they discuss a home's energy efficiency with the builder's representative and who initiates the discussion. About 14% of appraisers report that they usually discuss energy efficiency with the builder's representative, and 26% report that they

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sometimes discuss energy efficiency. However, 60% of appraisers report that they rarely or never get energy efficiency information from the builder's representative. Moreover, among those appraisers who at least sometimes discuss energy efficiency with the builder's representative, one-third report that the builders usually initiate such discussions. Only about one fourth of appraisers find the issue of energy efficiency important enough to initiate discussions with the builder.

About half of the appraisers interviewed indicated that they have conducted an appraisal for an energy efficient home. Those who indicated that they had conducted such an appraisal, were asked, "Who informs you about the energy efficiency of the home?" and "What factors make you reach the conclusion that a home is energy efficient?" Table 2.5 shows who informed the appraiser that the home was "energy efficient," and Table 2.6 shows the factors that appraisers use to determine energy efficiency. Only 15% of the appraisers reported that their determination of energy efficiency was the result of a personal inspection of the home. About 85% relied on other sources, with homeowners being the most common source. When asked about the factors that determine energy efficiency, about 60% of appraisers mentioned insulation R-values and energy-efficient windows. About one-third mentioned equipment efficiency rates. Very few appraisers mentioned any other indicators of efficiency as being important. These findings suggest that appraisers are not well informed about the determinants of energy usage in a new home and have no clear standard for assessing energy efficiency.

Table 2.5: Information Source on Energy Efficiency *(Appraised an Energy Efficient Home)*

Source	Percent of appraisers who mentioned source
Homeowner	33%
Builder	22%
Personal inspection	15%
Lender	11%
Agent	4%
Utility company	4%
Other	11%

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Table 2.6: Key Energy Efficiency Measures *(Appraised an Energy Efficient Home)*

Factor	Percent of appraisers who mentioned factor
Insulation R-value	63%
Window efficiency	59%
HVAC/water equipment efficiency	37%
Air-conditioning equipment sizing	11%
Presence of basement insulation	11%
Duct tightness / insulation	7%
Air infiltration rates	4%
Programmable thermostats	4%
Other	19%

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IV. Appraiser Perceptions of Builders and Lenders

The second purpose of the Appraiser Survey is to help the Working Group improve its program design by enhancing its understanding of how the residential new construction market works, and its understanding of the barriers and opportunities for the ENERGY STAR Homes Program. To help meet this objective, the survey asked appraisers to discuss their perceptions of the behaviors of homebuilders and lending institutions.

The survey furnishes three important findings about appraisers' perceptions of the builder and lender practices.

1) Appraisers perceive that home appearance gets the most attention from builders in all market segments. They perceive that energy costs get less attention than any other home attribute except maintenance costs.
2) Few appraisers are aware of builders who participate in one of the RNC programs, but about half are aware of a builder who promotes his or her homes as energy efficient.
3) About one-third of appraisers say that lenders would value ENERGY STAR certified homes higher than other homes. Most think that the valuation premium for a $200,000 home would be in the 5% to 10% range. However, 60% of appraisers think that lenders would place no added value on certified homes.

The energy efficiency of a home is not a focus for appraisers, and they do not perceive that it is of significant interest to other market actors.

A. Perceptions of Builder Practices and Knowledge

Appraisers who appraise homes in the residential new construction market have the opportunity to see the products of many different builders. Subject to the limitations of their technical knowledge about energy efficiency, they are among the best informants regarding the energy practices of builders. In the survey, we asked appraisers how much attention builders pay to various aspects of construction in different market segments. Table 3.1 shows the perceptions of appraisers regarding the percentage of builders who pay a lot of attention to each of the listed home attributes for the three market segments.

It is the perception of appraisers that, for all market segments, appearance is the attribute to which builders pay the most attention when constructing a home. For all of the other measured attributes,

there is a fairly tight clustering of responses within each market segment, with very significant differences between market segments. For example, 37% of appraisers think that builders in the low cost housing market segment (less than $150,000) pay a lot of attention to home appearance. However, the percentage of appraisers who think builders in this market segment pay a lot of attention to other attributes ranges from 7% to 16% for the different attributes. The range is 23% to 44% for the mid-level market segment and 61% to 81% for the most expensive housing market segment. The one exception is maintenance costs. Even for the most expensive market segment, only 38% of appraisers think that builders pay a lot of attention to that attribute. Energy costs are consistently rated below all other attributes except maintenance costs.

Table 3.1: Builder Attention to Home Attributes

	Market Segment		
Attribute	**Less than $150,000**	**$150,000 to $300,000**	**More than $300,000**
Appearance	37%	68%	98%
Convenience	16%	35%	68%
Durability	9%	30%	68%
Quality of workmanship	9%	44%	81%
Comfort	12%	44%	75%
Maintenance costs	7%	23%	38%
Energy costs	7%	26%	61%

We also asked appraisers how frequently the builder's representative is able to provide information on various energy characteristics of the homes. Table 3.2 presents information on the percentage of appraisers who report that builders usually could give them the information and the percentage who report that builders sometimes could give them the information. Most appraisers report that builders' representatives usually can furnish information about R-values, and close to half report that builders can usually furnish information about the sizing of air conditioning equipment and the presence of basement insulation. Appraisers report that the builders' representatives are

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much less knowledgeable about equipment and appliance efficiency, air infiltration rates, and duct tightness and insulation.

Table 3.2: Builder's Knowledge of Energy Characteristics

Characteristic	"Usually can furnish information about"	"Sometimes can furnish information about"
R-values of insulation	68%	16%
Efficiency of HVAC equipment	28%	21%
Efficiency of water heater	32%	19%
Sizing of air conditioning equipment	49%	18%
Presence of low-E windows	42%	18%
Presence of basement insulation	51%	16%
Presence of setback thermostats	40%	26%
Efficiency ratings of appliances	28%	21%
Air infiltration rates	11%	14%
Duct tightness and insulation	21%	14%

Few appraisers are aware of builders who participate in one of the RNC programs. Only 14% know of a builder who promotes homes under the ENERGY STAR logo, 5% know of a GOOD CENTS builder, and 5% know of an EEH 5 Star builder. About half of the appraisers are aware of a builder in the area who promotes his or her homes as energy efficient.

B. Perceptions of Lender Practices

Survey respondents indicated that lenders commission about 75% of their work. Lender attitudes can be expected to have a significant impact on appraiser actions. In the survey, we asked appraisers to rate the importance of cost factors, including energy costs, in developing a final valuation. Table 3.3 shows that real estate taxes and insurance costs are the factors that are most likely to influence lender valuation. Even though annual energy costs are greater than annual costs for all of the other factors listed (except estate taxes), it is at the bottom of the list in terms of influence on lender valuation.

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Table 3.3: Importance of Factors in Lender Valuation

Factor	Very Important	Somewhat Important
Real estate taxes	42%	40%
Insurance costs	25%	46%
Water/sewer costs	14%	42%
Energy costs	9%	40%
Maintenance costs	7%	46%

When asked if RNC program certification would increase a lender's valuation of a home, 4% of appraisers say that lenders would value a certified home a lot more, and 35% say that they would value it somewhat more than uncertified homes. The mean value increment for a $200,000 home is 7.5%, implying that those appraisers think that a lender would accept a valuation increase of $15,000. However, 60% of appraisers feel that lenders would think that certified homes are worth about the same as uncertified homes.

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V. Recommendations for RNC Programs

New Jersey's utilities will need to make choices on how to allocate funds to the residential new construction market transformation programs. In the Appraiser Survey, we collected information that can contribute to that decision. Appraisers were asked about their perceptions of the best strategies for reaching consumers and were asked to suggest what type of training they would find most useful. In combination with the findings from the other RNC baseline surveys, these perceptions should help the Working Group to suggest an effective allocation of resources.

The survey shows that appraisers perceive that builders, the experiences of other homebuyers, and real estate agents have the greatest influence on the decisions of new homebuyers. Appraisers suggest that dollars and cents messages would have the greatest influence on homebuyers, but there is no consensus among appraisers regarding the most effective way to reach homebuyers.

The survey shows that most appraisers regularly receive training, but that few have received training on energy efficiency. It also shows that most appraisers think that training on energy efficiency programs would be "very helpful" and that the majority "definitely would" attend such training. Although most appraisers currently receive training from appraiser organizations, most recommend that the utilities offer this training directly.

A. Strategies for Marketing RNC Programs to Homebuyers

Appraisers have some direct contact with homebuyers. We asked them to give us their perceptions of who has the most influence with homebuyers, what marketing messages would speak most directly to homebuyers, and what marketing strategies would be able to reach homebuyers.

Table 4.1 shows the influence that various market actors have on "a homebuyer's decision to buy a particular type of home." According to appraisers, builders have the greatest influence on homebuyer purchase decisions, and "family and friends" are a close second. Only about one-fourth of appraisers think that real estate agents have a lot of influence, and fewer than one in five appraisers think that the news media, the Internet, or consumer advocates have a lot of influence. Therefore, from the appraiser perspective, getting builders to see the benefits of the program and the positive experiences of consumers

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with ENERGY STAR homes are most likely to translate into more consumer interest.

Table 4.1: Influence on Homebuyer's Purchase Decision

Factor	"A lot of influence"	"Some influence"
Family and friends	40%	44%
Real estate agents	26%	53%
Builders	54%	35%
News media	18%	46%
Internet	7%	42%
Consumer advocates	21%	39%

Table 4.2 shows which messages appraisers feel would be most influential in getting a homebuyer to purchase an energy efficient home . Appraisers perceive that dollars and cents messages would have the greatest influence on consumers. They perceive that other attributes would be less influential.

Table 4.2: Effectiveness of Test Messages

Message	"A lot of influence"	"Some influence"
ENERGY STAR homes will save 30% on energy costs	53%	40%
ENERGY STAR homes have a greater resale value	39%	42%
ENERGY STAR homes provide more home for the money	26%	44%
ENERGY STAR homes are quieter, more comfortable homes	28%	53%
ENERGY STAR homes are better for the environment	23%	44%

Table 4.3 shows which marketing strategies appraisers believe would be most effective in reaching consumers. Almost 40% of appraisers suggest that rebates and other monetary incentives would have the greatest influence on customers. In terms of advertising, no

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consensus approach is suggested. Working through builders and real estate agents is mentioned, as are various types of advertising.

Table 4.3: Marketing Strategies

Marketing Strategy	Percent of appraisers identifying this as an effective strategy for marketing energy efficient homes
Publicity through builders	16%
Publicity through agents	14%
TV / Radio advertisements	18%
Newspaper advertisements	5%
Rebates and other monetary incentives	37%

B. Training for Appraisers

It is clear from this research that appraisers have a limited understanding of the ENERGY STAR Homes program. One way for the utilities to communicate with appraisers would be through training programs. In the survey, appraisers were asked to indicate whether they would be interested in training and to identify the type of training that they would find the most valuable.

Four out of five appraisers surveyed had participated in some form of training in the last year. They were most likely to have received training on appraisal techniques and certification classes. For most, the training was organized by a national or local appraiser organization.

Only one in three appraisers has *ever* received training on energy efficiency programs. Among those who received training, most received it from national or local appraisal organizations. Only 10% received energy efficiency training from builders, and only 10% received it from a utility company. Most appraisers who received the training think it was very helpful.

Almost two-thirds of appraisers think that training on the ENERGY STAR homes program would be very helpful, and more than 50% say that they would definitely attend such training. The majority of appraisers (54%) think that this training should be offered directly by the utility companies.

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Appendix

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Residential New Construction Attitude and Awareness Baseline Study

Participating and Nonparticipating Homebuyer Surveys

Report on Findings

Prepared for the New Jersey Residential New Construction Working Group

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Executive Summary

This Report presents the findings from the Nonparticipating and Participating Homebuyers Surveys for the New Jersey Residential New Construction Awareness and Attitudinal Baseline Study (RNC study). A summary report entitled *Residential New Construction Attitude and Awareness Baseline Study-Integrated Summary: Report on Findings*, consolidates information from this and other research tasks conducted for the RNC Study.

A. Background

The New Jersey Residential New Construction Working Group (Working Group), which consists of Public Service Electric &Gas Company, GPU Energy, Conectiv Power Delivery, NUI Elizabethtown Gas Company, South Jersey Gas, Rockland Electric Company, and New Jersey Natural Gas Company, is charged with developing and implementing a coordinated, statewide utility residential new construction program that will increase the energy efficiency of new homes constructed in New Jersey. In support of that effort, the Working Group has commissioned a comprehensive study of New Jersey's residential new construction market with the following goals.

- *Baseline Measurement*: The primary objective of the study is to establish a baseline that documents the current market for ENERGY STAR homes.

- *Program Design and Implementation*: The secondary objective of the study is to enhance the Working Group's understanding of the residential new construction market.

- *Customer Sited Clean Generation*: In addition, this study will support the work of the Customer Sited Clean Generation Working Group (CSCG Working Group).

The Working Group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study. The purpose of this survey is to obtain information on homebuyer awareness of and attitudes toward the purchase of energy efficient homes. As part of

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this study, we conducted a survey of 200 homebuyers who bought their home in 1998, 1999 or 2000 and whose home did not participate in any of the three existing utility residential new construction programs. We also conducted a survey of 166 homebuyers who bought their home in 1998, 1999 or 2000 and whose home participated in one of the three existing utility residential new construction programs.

B. Awareness of and Attitudes Toward the ENERGY STAR Label

The Homebuyer Surveys collected information on awareness of and attitudes toward the ENERGY STAR Label.

1. Awareness of the ENERGY STAR Label

Awareness of the ENERGY STAR label was measured by asking survey respondents whether they "have ever seen or heard of the ENERGY STAR logo that is on some new appliances, electronic equipment, and homes." About half (46%) of Nonparticipating Homebuyers report that they have seen the ENERGY STAR label. Awareness varies somewhat among different subgroups of homebuyers. However, there is no consistent pattern of awareness that would suggest that one market segment is more aware of the program.

Among Participating Homebuyers, more than half (58%) report that they have seen the ENERGY STAR label. The difference between Nonparticipating and Participating Homebuyers is statistically significant. It appears that the difference in awareness of the ENERGY STAR label between Participating and Nonparticipating Homebuyers results from participation in utility RNC programs that use the ENERGY STAR label.

2. Sources of Homebuyer Information about the ENERGY STAR Label

The majority (58%) of Nonparticipating Homebuyers saw the ENERGY STAR label on appliances or electronic equipment, while 27% saw it in print advertisements, TV commercials, or store displays. No respondent in this group reported seeing the label on utility company mailings.

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About one-third (37%) of Participating Homebuyers saw the ENERGY STAR label on appliances or electronic equipment, while 17% saw it in print advertisements, TV commercials, or store displays. About one-third of Participating Homebuyers (31%) learned about ENERGY STAR through builders, real estate agents, or the utility company.

3. Meaning of the ENERGY STAR Label

When asked the open-ended question "What does the ENERGY STAR label mean?" most Nonparticipating Homebuyers (73%) respond that the ENERGY STAR label means that the product saves energy or is energy efficient. Only 21% of respondents volunteer that it means that the product "saves money." One interpretation of these data is that homebuyers fail to understand that energy savings translate directly into cost savings.

Most Participating Homebuyers (61%) said that ENERGY STAR products save energy or are energy efficient. A little over a fourth (27%) said that the ENERGY STAR label means cost savings. Three respondents reported that the ENERGY STAR label means that the product was built to a specific standard.

Table 1: Meaning of the ENERGY STAR Label

The ENERGY STAR Label Means. . .	Nonparticipating Homebuyers	Participating Homebuyers
The product saves energy	73%	61%
The product saves money	21%	27%
The product is built to standard	0%	3%
It is on the appliance	8%	3%
Nothing	3%	7%

4. Purchase of ENERGY STAR Products

Many survey respondents have purchased ENERGY STAR products. About one-third of both Participating Homebuyers (29%) and Nonparticipating Homebuyers (32%) report that they have purchased at least one product with the ENERGY STAR label. Table 2 shows the percentage of each group that has purchased ENERGY STAR products of different types. The

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table also shows the share of product purchasers who report that they were influenced in their selection of the product by the ENERGY STAR label. For most products, the ENERGY STAR label influenced at least half of those purchases.

Table 2: ENERGY STAR Product Purchase and Influence

	Nonparticipating		Participating	
Product	Purchased ENERGY STAR Product	Share Influenced by Label	Purchased ENERGY STAR Product	Share Influenced by Label
Central Air	10%	52%	15%	60%
Furnace / Boiler	10%	53%	11%	67%
Heat Pump	2%	50%	6%	78%
Room Air	5%	50%	3%	50%
Computer Equip.	22%	33%	13%	29%
Lighting fixtures	6%	64%	3%	60%
Dishwasher	13%	73%	15%	44%
Refrigerator	19%	63%	17%	59%
Clothes Washer	15%	60%	15%	67%
Thermostat	6%	77%	14%	64%
Home	5%	50%	19%	52%

5. ENERGY STAR Influence on Appliance and Equipment Purchases

Homebuyers were asked to project how much influence an ENERGY STAR label would have on their decision to purchase a particular energy-using product. One in four (24%) Nonparticipating Homebuyers reports that the label would have a lot of influence, and more than half (56%) report that it would have at least some influence. More than a third (36%) of Participating Homebuyers report that the label would have a lot of influence, and almost 80% report that it would have at least some influence. The difference between these two groups of homebuyers is statistically significant.

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C. Awareness of and Attitudes Toward Existing Utility RNC Programs

Three New Jersey electric utilities have had residential new construction programs; GPU Energy's Good Cents program, Conectiv Power Delivery's ENERGY STAR Homes program, and PSE&G's EEH Five Star Program. In the baseline survey, we measured awareness of and attitudes toward the existing programs.

1. Awareness of Existing RNC Programs

The Participating Homebuyer and Nonparticipating Homebuyer Surveys directly measured awareness of the existing RNC programs. Table 3 summarizes awareness of each utility program, awareness of the EPA ENERGY STAR Homes program, and awareness of any of the four programs.

Table 3: RNC Program Awareness for Nonparticipating and Participating Homebuyers

Aware of Program	Program Sponsor				
	Conectiv	GPUE	PSE&G	EPA	Any Program
Nonparticipating	9%	25%	22%	15%	51%
Participating	87%	85%	66%	25%	81%

Among Nonparticipating Homebuyers, the GPU Energy and PSE&G programs are apparently better known than the Conectiv Power Delivery program. However, Conectiv Power Delivery has the smallest service territory among the three utilities. After adjusting for regional difference, it appears that the programs have similar awareness levels. About half of the Nonparticipating Homebuyers are aware of at least one of the existing utility RNC programs or of the EPA ENERGY STAR Homes program.

One might expect that all Participating Homebuyers would be aware of the existing RNC programs. However, unless the homebuyer is the general contractor, the RNC program relationship is between the builder and the utility. The homeowner will know that the home meets program standards only if it is marketed as an RNC program home. Awareness is

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lowest among PSE&G participants. Since many homes constructed under PSE&G's program are Affordable Housing Program homes, it is likely that buyers of the Affordable Housing Program homes focus much more on the affordability aspect of the home purchase, than on the EEH 5 Star designation.

2. Sources of Information About RNC Programs

For Nonparticipating Homebuyers, the primary sources of information about existing RNC programs are print advertisements (28%), utility company mailings (40%), and friends or relatives (10%). Among Participating Homebuyers, the primary sources of information about existing RNC programs are print advertisements (14%), utility mailings (24%), and builders or contractors (24%).

3. Influence of ENERGY STAR on Home Purchase Decision

Homebuyers were asked to project how much influence the ENERGY STAR label would have on their decision to purchase a particular home. Table 4 shows the responses for the two groups of homebuyers. Only 15% of Nonparticipating Homebuyers report that the ENERGY STAR label would have a lot of influence, but more than half report that it would have at least some influence. More than a third of Participating Homebuyers report that the name would have a lot of influence, and almost 70% report that it would have at least some influence.

Table 4: Projected Influence of ENERGY STAR Label on Home Purchases

Response	Nonparticipating Homebuyers	Participating Homebuyers
A lot of influence	15%	34%
Some influence	36%	35%
Very little influence	20%	12%
No influence at all	26%	12%
Don't know	6%	7%

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D. Home Purchase Decision Process

Homebuyers consider a number of different factors as they search for a home, including community attributes, neighborhood attributes, and house attributes. The Homebuyer surveys document the factors that appear to be of the greatest importance to homebuyers and identify ways that an RNC program could increase homebuyers' consideration of energy efficiency in the purchase decision.

1. Reasons for Buying a New Home

Homebuyers were asked the open-ended question "What were your reasons for deciding to purchase a new home?" Homebuyers reported a range of reasons for home purchase; reasons given by Nonparticipating Homebuyers were similar to those given by Participating Homebuyers. Many of the reasons given were clearly relate to "life stage" variables (e.g., new or growing families needed a larger home or retiring couples needed a smaller home). In marketing ENERGY STAR homes, it is appropriate to consider how ways to relate ENERGY STAR to those "life stage" factors.

2. Home Search Process

For most homebuyers the search process was extensive. On average, Nonparticipating Homebuyers spent five months searching for a suitable home, while Participating Homebuyers spent six months. Most homebuyers reported that they looked at several homes before deciding on the one that they purchased. About half of homebuyers reported that they visited both previously owned and new homes. It is clear that most homebuyers shop for the home that they purchase and give marketers an opportunity to influence the home purchase decision in some meaningful way.

3. Neighborhood Selection

Homebuyers gave us information on how they found the neighborhood that they selected and what factors contributed to neighborhood selection.

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a) Locating Neighborhoods

Many homebuyers located neighborhoods through personal sources, though were introduced to their neighborhoods by advertisements or agents. Table 5 shows the most common sources of information about neighborhoods. It is clear that informal sources of information are influential.

Table 5: Most Common Sources of Information about Neighborhoods

Source of Information	Nonparticipating Homebuyers	Participating Homebuyers
Friends/relatives	22%	25%
Newspaper/magazine ads	22%	10%
Driving around	22%	27%
Real Estate Agent	10%	4%
Already familiar with area	13%	27%

b) Selecting Neighborhoods

Homebuyers select what they perceive to be "good" neighborhoods. Homebuyers in both groups focused on safety, good schools, and proximity to work. Few reported that low taxes, convenient transportation, or closeness to shopping were important. Table 6 identifies the most common reasons reported by Participating and Nonparticipating Homebuyers for selecting a neighborhood.

Table 6: Reasons for Selecting a Neighborhood

Main Reason	Nonparticipating Homebuyers	Participating Homebuyers
Better neighborhood/safer	20%	23%
Proximity to work	12%	9%
Better schools	12%	6%
Affordability	10%	9%

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It is not clear that there are any attributes in neighborhood selection that would suggest ways of more effectively marketing ENERGY STAR. Rather, it appears that ENERGY STAR homes need be made available in those neighborhoods that homebuyers seek.

4. Home Selection

Homebuyers gave us information on how they found the home that they selected and what factors contributed to home selection.

a) Locating Homes

The survey asked homeowners to indicate whether ". . . any of the following information sources helped give you ideas for the home that you wanted to buy." The most common sources identified by Participating Homebuyers were builder open houses (56%), print advertisements (49%), real estate agents (44%), and friends or relatives (37%). Fewer than 10% of homebuyers report getting ideas from radio or television broadcasts, lenders, or utilities. A small, but probably growing percentage (15%) uses the Internet. The patterns are similar for Participating Homebuyers. Our subgroup analysis did not demonstrate any systematic patterns for different market segments. It appears that homebuyers use their own personal network to find the neighborhoods in which they live. However, they use information from builders and real estate agents to decide which home to select within a neighborhood.

b) Selecting Homes

Market actors that influence the homebuyer's decision to purchase a specific home include builders, real estate agents, and lending institutions. Some Participating Homebuyers report that the utility company influenced their purchase decision. This highlights the need to reach out to those professionals in ENERGY STAR marketing.

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Table 7: Influence of Market Actors on Home Purchase Decision

Agent has "a lot" or "some influence	Nonparticipating Homebuyers	Participating Homebuyers
Builder	62%	69%
Real estate	21%	22%
Lender	14%	21%
Utility company	5%	17%
Homebuyer education class	4%	13%

Homebuyers most often select a specific home because of the location, style, price, and size. Energy efficiency was not mention as a primary reason for purchasing a home, but a significant number of homebuyers reported that energy efficiency had a lot of influence on their decision to purchase. However, energy efficiency was the least important of the listed factors.

Table 8: "A Lot" of Influence on Home Purchase

Factor	Nonparticipating Homebuyers	Participating Homebuyers
Location	83%	73%
Appearance	70%	75%
Price	70%	62%
Size	65%	69%
Quality of Construction	74%	78%
Comfort	52%	71%
Availability of Upgrades	40%	45%
Mortgage Financing	32%	36%
Energy Efficiency	28%	39%

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5. Projected Influence of Program Incentives on Purchase

Homebuyers indicate that the availability of a reduced interest rate would have "a lot of influence" on their selection of a particular home, while only about one-fourth of homebuyers projected that energy efficiency certification would have a lot of influence. It is possible that these responses are actually a proxy for the perceived financial value of the listed incentives. Homebuyers perceive there interest rate reductions have a larger financial value than reduced mortgage costs and utility rebates.

Table 9: Projected Influence of RNC Incentives

Response	Nonparticipating Homebuyers	Participating Homebuyers
Reduced mortgage rates	61%	36%
Reduced mortgage costs	48%	42%
Utility rebates	40%	4%
Energy efficiency certification	28%	8%

E. Energy Efficiency in Home Purchase

Energy efficiency does not dominate the home selection process. (See Table 8) However, homebuyers do consider energy efficiency when they purchase homes. In the Participating and Nonparticipating Homebuyer surveys, we found that many homebuyers chose to increase the energy efficiency of their home through the purchase of upgrades to standard items. We also learned that most Nonparticipating Homebuyers perceive their home to be energy efficient.

1. Selecting Energy Efficient Homes

Neither Nonparticipating or Participating Homebuyers appeared to seek out "energy efficient" homes. Most Nonparticipating Homebuyers (88%) purchased production homes and were limited to energy efficiency options offered by the builder. Only 15% of Participating Homebuyers actively sought out a builder who would build them a home that met the utility RNC program standards.

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2. Energy Efficiency as an Upgrade

Most Nonparticipating Homebuyers (70%) and many Participating Homebuyers (41%) report purchase of upgrades. About one-third of Nonparticipating Homebuyers say that they purchased an upgrade that increased the energy efficiency of their home. This suggests that many homebuyers are willing to invest in energy efficiency to save on energy costs in the future.

3. Types of Energy Efficiency Upgrades Purchased

Of Nonparticipating Homebuyers who purchased an energy efficiency upgrade package, about one third (30%) bought an improved heating and cooling system, while one fifth (18%) bought improved insulation for their new home.

4. Reasons for Purchasing Energy Efficiency Upgrade Packages

We asked Nonparticipating Homebuyers who bought energy efficiency upgrades to explain the reasons that led them to this purchase. Savings on energy bills emerges as the most important reason among Nonparticipating Homebuyers, but significant percentages report that their reason for the purchase was to improve the home's comfort or its indoor air quality.

Table 11: Reasons for Purchasing Efficiency Upgrades

Reasons for Purchase of Energy Efficiency Upgrade	Nonparticipating Homebuyers
Save on energy bills/cost of energy too high	55%
More comfortable	26%
Better indoor air quality	11%
Better quality equipment/last longer/lower maintenance costs	5%
Higher resale value	3%
Environmentally conscious	1%
Other	9%

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5. Concerns About Energy Use

Most homebuyers show some concern about how much energy their home uses and the patterns are similar across the two homebuyer groups. Over two-thirds of Nonparticipating Homebuyers (71%) report that they worry "a lot" or "some" about the energy use of their home. Most Nonparticipating Homebuyers (84%) worry about the home's energy use because they want to save on energy bills or energy costs are too high.

Table 12: Reasons to Worry about Energy Use

Reason for worry	Nonparticipating Homebuyers	Participating Homebuyers
Lower energy bills/costs too high	84%	83%
Better environment	6%	6%
Energy crisis/shortage/dependence	4%	3%
Better quality equipment	1%	0%
Better indoor air quality	0%	1%
More comfortable home	2%	3%

6. Energy Efficiency of the Home

In the surveys, we asked homebuyers to rate their homes compared to the "typical home." In general, we found that homebuyers perceived that their homes are "energy efficient." 78% of Nonparticipating Homebuyers and 92% of Participating Homebuyers consider their homes to be "energy efficient."

Among Nonparticipating Homebuyers who think of their home as energy efficient, the median estimate of the cost of making their home energy efficient is $1,600. Nonparticipating Homebuyers who think that their home is not energy efficient had a much higher estimate of the cost of energy efficiency. The median estimate of the cost of making it energy efficient is $2,700

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Table 13: Cost of Energy Efficiency

Because of energy efficiency, the home's purchase price is increased by. . . .	"Think Home is Energy Efficient"	"Think Home is not Energy Efficient"
Did not increase at all	15%	4%
Less than $500	7%	0%
$500-$2,500	21%	32%
$2,500-$5,000	17%	25%
More than $5,000	13%	14%
Don't know	25%	25%

F. Homebuyer Relationship with Lenders

The relationship between homebuyers and lenders is important. Homebuyers identify lenders as a significant source of information about the housing market. Lenders are in a position to inform and educate homebuyers about specialized mortgage products such as energy efficient mortgages (EEM).

Most Nonparticipating Homebuyers (91%) reported that took out a mortgage to purchase their home. Most Nonparticipating Homebuyers (83%) were "somewhat satisfied" or "very satisfied" with their lenders. These statistics suggest that Homebuyers use lenders and find the experience of working with them satisfactory.

A very small percentage of both Participating and Non Participating Homebuyers have heard of EEMs. Among Participating Homebuyers, 7% report some knowledge of energy efficient mortgages, while among Nonparticipating Homebuyers the percentage is even lower, around three percent.

G. Satisfaction with Home Purchase

We asked homebuyers to tell us their satisfaction with various aspects of their home. Participating Homebuyers are more satisfied the Nonparticipating Homebuyers on every attribute except for the neighborhood. They perceive that their homes are well built, comfortable, quiet, have good indoor air quality, and have low energy

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bills. In particular, significantly more households are very satisfied with the quality of construction, the indoor air quality, the noise level, the overall energy efficiency, and annual energy costs.

Table 14: Percentage Very Satisfied With. . .

Response	Nonparticipating Homebuyers	Participating Homebuyers
Neighborhood	84%	78%
Appearance of home	85%	88%
Quality of construction	53%	75%
Comfort level	68%	77%
Indoor air quality	64%	75%
Noise level	61%	74%
Overall energy efficiency	48%	74%
Annual energy costs	38%	53%
Overall	76%	85%

Participating Homebuyers are more likely then Nonparticipating Homebuyers to say that their energy bills are lower than what they had expected them to be. Ninety one percent of Participating Homebuyers report that, in the future, if they need to buy a new home they will look for another program certified home.

H. Recommendations for RNC Programs

Based on the findings from the Homebuyer Surveys, we recommend a number of RNC program strategies.

1. Using the ENERGY STAR Label

The surveys demonstrated that about homebuyers are aware of and influence by the ENERGY STAR label. These findings demonstrate the value of using the ENERGY STAR label for the utility RNC programs. However, since the existing RNC program names have some statewide recognition, it will be important for any marketing efforts to help consumers understand the transition from the existing program names to the new program name.

2. Marketing ENERGY STAR Homes

While the energy efficiency of the a home can affect the purchase, it is clearly subordinate to a number of other concerns. Given the choice of two equivalent homes, the ENERGY STAR label may influence the home selection. However, it appears unlikely that the ENERGY STAR label would be enough to compensate for a home that was inadequate in other ways. Many homebuyers report purchasing energy efficiency upgrades. By offering ENERGY STAR as an upgrade, builders would allow homebuyers to tailor a home to their own specifications and may increase the marketability of the products.

3. Documenting the Benefits of ENERGY STAR Homes

A significant number of new homebuyers purchased energy efficiency upgrades with their new homes. Most of the households (84%) reported that they purchased the upgrades to reduce energy costs. To the extent that the utility RNC programs can document the benefits of purchasing an ENERGY STAR home, particularly the cost savings compared to other production homes, it can be expected to assist builders in marketing ENERGY STAR homes.

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I. Introduction

This Report presents the findings from the Nonparticipating and Participating Homebuyers Surveys for the New Jersey Residential New Construction Awareness and Attitudinal Baseline Study (RNC study). The Report furnishes background information on the surveys, an overview of the survey methodology, and baseline statistics on ENERGY STAR awareness and attitudes. A separate report presents detailed information on the survey methodology.

A summary report entitled *Residential New Construction Attitude and Awareness Baseline Study: Integrated Summary* consolidates information from this and other research tasks conducted for the RNC Study.

A. Background

The New Jersey Residential New Construction Working Group (Working Group), which consists of Public Service Electric & Gas Company, GPU Energy, Conectiv Power Delivery, NUI Elizabethtown Gas Company, South Jersey Gas, Rockland Electric Company, and New Jersey Natural Gas Company, is charged with developing and implementing a coordinated, statewide utility residential new construction program that will increase the energy efficiency of new homes constructed in New Jersey. In support of that effort, the Working Group has commissioned a comprehensive study of New Jersey's residential new construction market with the following goals.

- *Baseline Measurement*: The primary objective of the study is to establish a baseline that documents the current market for ENERGY STAR homes.

- *Program Design and Implementation*: The secondary objective of the study is to enhance the Working Group's understanding of the residential new construction market.

- *Customer Sited Clean Generation*: In addition, this study will support the work of the Customer Sited Clean Generation Working Group (CSCG Working Group).

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The working group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study. The study consists of 13 research components:

- Nonparticipating Homebuyer Study
- Participating Homebuyer Study
- Nonparticipating Homebuilder Study
- Participating Homebuilder Study
- Lender Study
- Residential Real Estate Appraiser Study
- Residential Real Estate Agent Study
- Building Inspector Study
- Trade Ally Study
- CSCG Analysis
- Residential New Construction Statistics
- Affordable Housing Organizations
- CSCG Industry Statistics

The 13 research tasks were conducted independently, since each required research and interviews with different market actors. However, all of the studies used common language and definitions so that the results are comparable across all studied market sectors.

B. Study Goals and Objectives

The purpose of this study is document the awareness existing utility RNC programs among new homebuyers, develop an understanding of the purchase decisions made by new homebuyers, and identify ways that new RNC programs can influence the home purchase decision. The primary instruments used to develop this information are the surveys among Nonparticipating Homebuyers (homebuyers whose homes did not receive utility RNC program incentives) and

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Participating Homebuyers (homebuyers whose homes did receive utility RNC program incentives). The survey collected the following information.

- *Baseline Attitudes and Awareness*: The surveys asked homebuyers about their awareness of and experience with the ENERGY STAR label and the existing utility-sponsored RNC programs.

- *Homebuyer Decision-Making Process*: The surveys collected information from homebuyers regarding their home purchase decision to identify the factors that had the greatest influence on their purchase decision.

- *Homebuyer Satisfaction*: The surveys collected information on homebuyers' satisfaction with their homes to assess the performance differential between participating and nonparticipating homes.

C. Target Population

Influencing the decision-making process of homebuyers requires an in-depth understanding of the socioeconomic and behavioral characteristics homebuyers, including those who bought homes that did not receive any existing RNC program incentives and those who bought homes that did receive such incentives. As part of this study, we conducted two individual and independent surveys.

- The Nonparticipating Homebuyer Study surveyed 200 homebuyers who purchased newly constructed homes in 1999 or 2000 and whose home did not participate in any of the three existing utility RNC programs.

- The Participating Homebuyer Study surveyed 166 homebuyers who purchased newly constructed homes in 1998, 1999 or 2000 and whose home participated in one of the three existing utility RNC programs.

This Report combines information and findings from both surveys.

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D. Study Methodology

The study consisted of 200 telephone interviews with Nonparticipating Homebuyers and 166 interviews with Participating Homebuyers who bought a newly constructed home in New Jersey. In designing and conducting this study, we attempted to establish an appropriate balance among data quality, timeliness, and cost. We are confident that the procedures we used will furnish reliable information to the Working Group. However, it is important for data users to understand the procedures employed and any limitations resulting from the procedures that were selected. Moreover, since this is a baseline study, any subsequent study that attempts to measure a change in the residential new construction market must use similar procedures to ensure that measured changes are defensible.

The *Nonparticipating Homebuyers Methodology Report* and the *Participating Homebuyers Methodology Report* furnish detailed information on the survey procedures. The following are the most important aspects of the design and implementation of the survey.

- *Sample Frame*: The sample frame for the Nonparticipating Homebuyers Survey was a list of 6,797 recently sold homes supplied by First American Real Estate Solutions. First American maintains a database with information on home sales provided by county assessor offices. The sample frame for the Participating Homebuyer survey were lists of participating homebuyers provided by PSE&G, GPU Energy and Conectiv Power Delivery.

- *Sample Selection*: For the Nonparticipating Homebuyers Survey, we requested records from the First American Real Estate Solutions database based on specific criteria. These criteria are: 1)homes with only one transaction record in the database; 2) homes sold since January 1, 1999, and 3) homes defined as one of a number of listed residential housing types. The sample was selected within each of New Jersey's 21 counties proportionate to the amount of new construction reported in each county in 1999. For the Participating Homebuyers Survey, we included all the cases provided by the utility companies.

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- *Respondent Contact*: We sent an advance letter to sampled homes describing the purpose of the survey. We contacted the homebuyer by telephone and conducted the interview.

- *Interview*: The interview was administered by a Computer-Assisted Telephone Interviewing (CATI) system. The average length of the interview for Nonparticipating Homebuyers was 22 minutes, and for Participating Homebuyers it was 21 minutes.

- *Incentive*: For the Nonparticipating Homebuyer Survey, each respondent was sent a $5 check for participation in the interview. For the Participating Homebuyer Survey, each respondent was sent a $2 for participation in the interview.

The Nonparticipating Homebuyers Survey attained a 50% response rate. The Participating Homebuyers Survey attained a 58% response rate.

E. Sampling Tolerances of Survey Estimates

Surveys that use a sample drawn from a population are subject to tolerances, or margins of error, based on sampling variability. The probably limits of such sampling tolerances vary with the size of the sample and the magnitude of the percentage of any survey finding.

The sample size for the Nonparticipating Homebuyers Survey was 200 cases. For most survey statistics based on all respondents, the sampling tolerances are +/- 7% at the 95% confidence level. Sampling tolerances for survey statistics based on three-fourths, one-half, and one-fourth of the respondents are +/- 8%, +/- 10%, and +/- 14% respectively.

The sample size for the Participating Homebuyers Survey was 166 cases. For most survey statistics that are based on all respondents, the sampling tolerances are +/- 8%. Sampling tolerances for survey statistics based on three-fourths, one-half, and one-fourth of the respondents are +/- 9%, +/- 12%, and +/- 16% respectively.

The sampling tolerances for comparing percentages for the Nonparticipating Homebuyers to the Participating Homebuyers are approximately +/- 10% at the 95% confidence level.

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II. Awareness of and Attitudes Toward the ENERGY STAR Label

The primary goal of the Homebuyer Surveys is to establish a baseline against which market changes resulting from the utilities' residential new construction programs can be measured. To meet this goal, the Homebuyer Surveys collected information on awareness of and attitudes toward the ENERGY STAR Label, the ENERGY STAR Homes program and the existing utility residential new construction programs. In this section of the report, we identify the key awareness and attitude measures for the ENERGY STAR Label, and furnish baseline statistics.

A. Awareness of the ENERGY STAR Label

Awareness of the ENERGY STAR label was measured by asking survey respondents whether they "have ever seen or heard of the ENERGY STAR logo that is on some new appliances, electronic equipment, and homes." There are important limitations to this measurement technique. First, many major appliances are displayed in the showroom with a Yellow FTC Energy Guide label. Some survey respondents may have reported awareness of the ENERGY STAR label, even though they have only seen the FTC Energy Guide label. Second, since the interview was conducted by telephone, we were unable to display the ENERGY STAR label. Some survey respondents may have seen the label previously, but in the context of the survey administration, were unable to report awareness without a visual prompt. The awareness estimates reported in this survey furnish a baseline estimate of awareness. To measure a change in awareness, the same question and survey mode should be employed.

About half (46%) of Nonparticipating Homebuyers report that they have seen the ENERGY STAR label. Awareness varies somewhat among different subgroups of homebuyers. However, there is no consistent pattern of awareness that would suggest that one market segment is more aware of the program. The strongest patterns appear to relate to age of homebuyer. Awareness was much lower for younger (18-29) homebuyers (24%) and slightly lower for older (60+) homebuyers (40%), while it was over 50% for other households. There are weaker trends in levels of awareness of ENERGY STAR by

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education, income and cost of home, with better-educated, higher income households, and buyers of higher priced homes more aware of ENERGY STAR. However, the increase in awareness is comparatively small (10-15 percentage points) and in most cases it is not statistically significant.

Among Participating Homebuyers, more than half (58%) report that they have seen the ENERGY STAR label. The difference between Nonparticipating and Participating Homebuyers is statistically significant. It appears that the difference in awareness of the ENERGY STAR label between Participating and Nonparticipating Homebuyers results from participation in utility RNC programs that use the ENERGY STAR label.

B. Sources of Homebuyer Information about the ENERGY STAR Label

Table 2.1 provides details about the sources from which homebuyers learned about the ENERGY STAR label.

Table 2.1: Sources of Homebuyer Information about ENERGY STAR Label

Homebuyer Source of Information	Nonparticipating Homebuyers	Participating Homebuyers
Appliances/equipment labels	58%	37%
Print advertisements	13%	10%
Newspaper/magazine articles	4%	1%
TV commercials	7%	4%
TV feature story	1%	1%
Store displays/sales people	7%	3%
Builders/contractors	3%	12%
Real Estate Agent	0%	5%
Friends/Relatives	0%	5%
Utility company	0%	14%
On the Home	0%	3%

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The majority (58%) of Nonparticipating Homebuyers saw the label on appliances or electronic equipment, while 27% saw it in print advertisements, TV commercials, or store displays. No respondent in this group reported seeing the label on utility company mailings.

About one-third (37%) of Participating Homebuyers saw the ENERGY STAR label on appliances or electronic equipment, while 17% saw it in print advertisements, TV commercials, or store displays. About one-third of Participating Homebuyers (31%) learned about ENERGY STAR through builders, real estate agents, or the utility company.

C. Meaning of the ENERGY STAR Label

Table 2.2 shows the different meanings that homebuyers ascribe to the ENERGY STAR Label.

When asked the open-ended question "What does the ENERGY STAR label mean?" most Nonparticipating Homebuyers (73%) respond that the ENERGY STAR label means that the product saves energy or is energy efficient. Only 21% of respondents volunteer that it means that the product "saves money." One interpretation of these data is that the majority of homebuyers fail to make the connection that energy savings translate directly into money savings.

Table 2.2: Meaning of the ENERGY STAR Label

The ENERGY STAR Label Means. . .	Nonparticipating Homebuyers	Participating Homebuyers
The product saves energy	73%	61%
The product saves money	21%	27%
The product is built to standard	0%	3%
It is on the appliance	8%	3%
Nothing	3%	7%

Similarly, most Participating Homebuyers (61%) respond that the ENERGY STAR label means that the product saves energy or is

energy efficient. A little over a fourth (27%) of Participating Homebuyers say that the ENERGY STAR label means energy savings for the consumer. Three of the Participating Homebuyers were able to report that the ENERGY STAR label means that the product was built to a specific standard.

D. Purchase of ENERGY STAR Products

Many survey respondents have purchased ENERGY STAR products. About one-third of both Participating Homebuyers (29%) and Nonparticipating Homebuyers (32%) report that they have purchased at least one product with the ENERGY STAR label. Table 2.3 shows the percentage of each group that has purchased ENERGY STAR products of different types. The table also shows the share of product purchasers who report that they were influenced in their selection of the product by the ENERGY STAR label. For most products, the ENERGY STAR label influenced at least half of those purchases. With the exception of the purchase of ENERGY STAR homes, there do not appear to be significant differences between the two groups of homebuyers.

Table 2.3: Previous ENERGY STAR Product Purchase and Influence

	Nonparticipating Homebuyers		Participating Homebuyers	
Product	Purchased ENERGY STAR Product	Purchase Influenced by Label	Purchased ENERGY STAR Product	Purchase Influenced by Label
Central Air	10%	52%	15%	60%
Furnace / Boiler	10%	53%	11%	67%
Heat Pump	2%	50%	6%	78%
Room Air	5%	50%	3%	50%
Computer Equip.	22%	33%	13%	29%
Lighting fixtures	6%	64%	3%	60%
Dishwasher	13%	73%	15%	44%
Refrigerator	19%	63%	17%	59%
Clothes Washer	15%	60%	15%	67%
Thermostat	6%	77%	14%	64%
Home	5%	50%	19%	52%

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E. ENERGY STAR Influence on Appliance and Equipment Purchases

Homebuyers were asked to project how much influence an ENERGY STAR label would have on their decision to purchase a particular energy-using product. Table 2.4 shows the responses for the two groups of homebuyers. One in four (24%) Nonparticipating Homebuyers reports that the label would have a lot of influence, and more than half (56%) report that it would have at least some influence. More than a third (36%) of Participating Homebuyers report that the label would have a lot of influence, and almost 80% report that it would have at least some influence. The difference between these two groups of homebuyers is statistically significant. It is unclear whether the higher level of influence for Participating Homebuyers relates to their positive experience with ENERGY STAR homes, or to some other factor. The differences between Nonparticipating and Participating Homebuyers are statistically significant.

Table 2.4: Projected Influence of ENERGY STAR on Product Purchases

Response	Nonparticipating Homebuyers	Participating Homebuyers
A lot of influence	24%	36%
Some influence	32%	42%
Very little influence	15%	4%
No influence at all	17%	8%
Don't know	13%	10%

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III. Awareness of and Attitudes Toward Existing RNC Programs

Three New Jersey electric utilities have had residential new construction programs; GPU Energy's Good Cents program, Conectiv Power Delivery's ENERGY STAR Homes program, and PSE&G's EEH Five Star Program. Each program had different goals, objectives, and procedures. As a result of restructuring legislation, all of New Jersey's electric and gas utilities are participating in a coordinated, statewide residential new construction program. The new program will have a common set of goals, objectives, and procedures. In the baseline survey, we measure awareness of and attitudes toward the existing programs. In any follow-up research, one would measure the change in awareness and attitudes resulting from the implementation of the statewide program. In the surveys, we measured the awareness of and attitude toward the four existing utility RNC programs among both Participating and Nonparticipating Homebuyers.

A. Awareness of Existing RNC Programs

The Participating Homebuyer and Nonparticipating Homebuyer Surveys directly measure awareness of the existing RNC programs. Table 3.1 summarizes awareness of each utility program, awareness of the EPA ENERGY STAR Homes program, and awareness of any of the four programs.

Table 3.1: RNC Program Awareness for Nonparticipating and Participating Homebuyers

	Program Sponsor				
Aware of Program	**Conectiv**	**GPUE**	**PSE&G**	**EPA**	**Any Program**
Nonparticipating	9%	25%	22%	15%	51%
Participating	87%	85%	66%	25%	81%

Among Nonparticipating Homebuyers, the GPU Energy and PSE&G programs are apparently better known than the Conectiv Power

Delivery program. However, since Conectiv Power Delivery has the smallest service territory among the three utilities, the lower level of awareness is expected. Thirty two percent of Nonparticipating Homebuyers from the South Region are aware of Conectiv Power Delivery's program. About half of the Nonparticipating Homebuyers are aware of at least one of the existing utility RNC programs or of the EPA ENERGY STAR Homes program. These patterns are consistent for the subgroups that we examined.

One might expect that all Participating Homebuyers would be aware of the existing RNC programs. However, unless the homebuyer is the general contractor, the RNC program relationship is between the builder and the utility. The homeowner will know that the home meets program standards only if it is marketed as an RNC program home. In Table 3.1, the percentage presented for each program represents the share of Participating Homebuyers aware of the RNC program in which their home participated. Under the column for any program, the percentage represents the awareness among all Participating Homebuyers. Awareness is lowest among PSE&G participants. Since, a significant fraction of the homes constructed under PSE&G's program are Affordable Housing Program homes, it is likely that buyers of the Affordable Housing Program homes focus much more on the affordability aspect of the home purchase, than on the EEH 5 Star designation.

B. Awareness of RNC Program Certification

Participating Homebuyers were asked whether they were aware that their home was certified by a utility RNC program. When the awareness questions was asked that way, 100% of Conectiv customers and 94% of GPU Energy Participating Homebuyers are aware of the status of their home, but only 60% of PSE&G Participating Homebuyers are aware of the participation of their home in the RNC program. Over all programs, 40% of Participating Homebuyers who are in an Affordable Housing Program are aware of the home's participation in the utility RNC program.

C. Sources of Information About RNC Programs

For Nonparticipating Homebuyers, the primary sources of information about existing RNC programs are print advertisements

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(28%), utility company mailings (40%), and friends or relatives (10%). For the ENERGY STAR Homes and Conectiv Power Delivery programs, print advertisements are the most common source of information. For the PSE&G and GPU Energy programs, utility mailings are the most common source of information.

Among Participating Homebuyers, the primary sources of information about existing RNC programs are print advertisements (14%), utility mailings (24%), and builders or contractors (24%). For the GPU Energy and the PSE&G programs, about one fifth of Participating Homebuyers mention builders or contractors as their primary source of information. Other sources of information about existing RNC programs are TV commercials (9%), friends or relatives (9%), and newspaper or magazine articles (7%).

These patterns are consistent across all subgroups that we examined. Table 3.3 presents the sources of information about existing RNC programs that Nonparticipating Homebuyers discuss in the survey.

Table 3.3: Primary Sources of Information about Existing RNC Programs (Nonparticipating Homebuyers)

Source of Information about Program	Conectiv	GPUE	PSE&G	EPA	Any
Utility company/came in the mail	18%	42%	47%	20%	40%
Newspaper/magazine advertisements	41%	20%	26%	40%	28%
Newspaper/magazine articles	12%	6%	2%	10%	8%
Builder/constructor	0%	2%	2%	3%	2%
Friends/Relatives	6%	10%	12%	10%	10%
Internet	0%	0%	0%	3%	1%
Radio Commercial	0%	0%	2%	3%	2%
TV commercial	6%	4%	2%	10%	5%
Store displays/sales person	6%	0%	0%	0%	1%
Billboard	12%	2%	0%	0%	3%
Other	0%	2%	5%	3%	4%

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D. Influence of ENERGY STAR on Home Purchase Decision

Homebuyers were asked to project how much influence the ENERGY STAR label would have on their decision to purchase a particular home. Table 3.4 shows the responses for the two groups of homebuyers. Only 15% of Nonparticipating Homebuyers report that the name would have a lot of influence, but more than half report that it would have at least some influence. More than a third of Participating Homebuyers report that the name would have a lot of influence, and almost 70% report that it would have at least some influence. These differences are statistically significant.

Table 3.4: Projected Influence of ENERGY STAR Label on Home Purchases

Response	Nonparticipating Homebuyers	Participating Homebuyers
A lot of influence	15%	34%
Some influence	36%	35%
Very little influence	20%	12%
No influence at all	26%	12%
Don't know	6%	7%

E. Other Benefits of Energy Star Homes

Survey respondents were asked the open-ended question "Other than energy efficiency, do you think there are any other benefits that might come from owning an ENERGY STAR home?" About one-third (30%) of Nonparticipating Homebuyers and almost half of Participating Homebuyers (46%) thought that there were other benefits. (The difference between the two groups is statistically significant at the 95% level.)

When specific home attributes were listed (See Table 3.5), many respondents agreed that each was likely to be a benefit of ENERGY STAR homes. Among the attributes, comfort enhancements were expected by the greatest percentage of respondents (90%), while indoor air quality improvements were expected by the lowest

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percentage of respondents (71%). In general, the Participating Homebuyers were more likely to expect ENERGY STAR Homes to deliver benefits than were Nonparticipating Homebuyers.

Table 3.5: Perceived Benefits of an ENERGY STAR Home

Response	Nonparticipating Homebuyers	Participating Homebuyers
Comfort	95%	99%
Resale value	90%	91%
Construction quality	81%	86%
Indoor air quality	71%	84%
Noise level	71%	80%
Other	15%	36%

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IV. Home Purchase Decision Process

Anyone who has purchased a home and/or has known someone who has purchased a home understands that the home purchase decision is a complex process for most homebuyers. Homebuyers consider a number of different factors as they search for a home, including community attributes, neighborhood attributes, and house attributes. The purpose of this survey is to document the factors that appear to be of the greatest importance to homebuyers and to identify ways that an RNC program could increase homebuyers' consideration of energy efficiency in the purchase decision.

To develop a better understanding of the home purchase decision process, the Homebuyer surveys asked questions regarding the search process, neighborhood selection factors, and home selection factors. In this section of the report we review the home purchase decision findings.

A. Reasons for Buying a New Home

Homebuyers were asked the open-ended question "What were your reasons for deciding to purchase a new home?" Nonparticipating Homebuyers reported many reasons for home purchase, including wanting a larger home (24%), wanting to own a home (10%), or having a change in family status such as marriage, widowhood or the birth of a child (7%), a job transfer (9%) and retirement (6%). Similarly, for Participating Homebuyers, the most important reasons for the purchase of a new home are the need for a larger home (33%), the desire to own a home (22%), and retirement (6%).

The reasons for home purchase are varied. However, they seem a little more predictable when we look at subgroups. For example, 20% of older homebuyers (60+) wanted a smaller home, while that was rarely mentioned by other homebuyers. On the other hand, 40% of those with children under 13 cited the need for a larger home and 24% of young homebuyers (18-29) cited marriage as a motivator for home purchase. It seems reasonable to suggest, then, that life stage factors are likely to have a strong influence on the decision to purchase a new home.

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Table 4.1 provides a summary of all the reasons mentioned by each group, as well as the main reason that led to the purchase decision.

Table 4.1: Homebuyers' Reasons for Purchasing a New Home

Reasons for decision to buy a new home	Nonparticipating Homebuyers		Participating Homebuyers	
	Reason Mentioned	Main Reason	Reason Mentioned	Main Reason
Job transfer	9%	9%	4%	3%
New Job	3%	3%	0%	0%
Needed larger home	24%	20%	33%	31%
Wanted smaller home	7%	7%	5%	5%
Wanted to own home	10%	9%	22%	19%
Wanted change	13%	11%	11%	10%
Change in family status	7%	6%	3%	3%
Retired	6%	6%	6%	5%
Better schools	2%	1%	4%	3%
Better neighborhood	3%	2%	0%	0%
Financial incentives	3%	2%	5%	4%
Lower taxes	3%	2%	0%	0%
Liked New Jersey	1%	0%	0%	0%
Other	22%	21%	15%	14%

B. Home Search Process

For most homebuyers the search process has been extensive. On average, Nonparticipating Homebuyers spend five months searching for a suitable home, while Participating Homebuyers spent six months (Table 4.2). Also, most homebuyers from both groups report that they looked at several homes before deciding on the one that they purchased (Table 4.3). It is clear that most homebuyers shop for the home that they purchase and give marketers an opportunity to influence the home purchase decision in some meaningful way.

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Table 4.2: Months Spent Looking for House

Response	Nonparticipating Homebuyers	Participating Homebuyers
0-3	38%	32%
4-6	31%	19%
7-12	24%	28%
13+	9%	10%
Median	5	6

Table 4.3: Number of Homes Visited

Response	Nonparticipating Homebuyers	Participating Homebuyers
0	8%	14%
2-5	27%	31%
6-10	20%	13%
11+	41%	22%
Median	9	5

The survey asked homebuyers to identify the types of houses they looked at during their search for a suitable home. Participating Homebuyers are almost evenly split, with 43% reporting that they visited both previously owned and new homes, and 42% saying that they only visited newly constructed homes. Among Nonparticipating Homebuyers, about 60% look exclusively at new homes and about 40% look at both new and previously owned homes. Table 4.3 summarizes this information.

Table 4.3: Types of Homes Visited

Types of Homes Visited	Nonparticipating Homebuyers	Participating Homebuyers
Both previously owned and new homes	59%	43%
New homes only	40%	42%

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C. Neighborhood Selection

In the surveys, we asked Homebuyers to give us information on how they found the neighborhood that they selected and what factors contributed to neighborhood selection.

1. Locating Neighborhoods

About one fourth of Nonparticipating Homebuyers learn about different neighborhoods by driving around (22%), through friends and relatives (22%), and through print advertisements (22%). About one tenth report that they learned about their current neighborhood from a realtor (10%), and a similar percentage (13%) report that they were familiar with the area before buying their new house. The results are similar for Participating Homebuyers. Table 4.4 presents the sources of information that homebuyers use to learn about neighborhoods.

Table 4.4: Sources of Information about Neighborhoods

Source of Information	Nonparticipating Homebuyers	Participating Homebuyers
Friends/relatives	22%	25%
Newspaper/magazine ads	22%	10%
Driving around	22%	27%
Newspaper/magazine articles	3%	4%
Real Estate Agent	10%	4%
Builder/contractor	2%	1%
Internet	3%	1%
Billboard	2%	2%
Utility company	0%	1%
Already familiar with area	13%	27%
Other	3%	2%

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These patterns are consistent for our analysis subgroups. Regardless of age, income, or education, homebuyers tend to rely on the same sources of information.

2. Selecting Neighborhoods

Homebuyers select what they perceive to be "good" neighborhoods. Homebuyers in both groups focused on safety, good schools, and proximity to work. Very few homebuyers reported that low taxes, convenient transportation, or closeness to shopping were important. Table 4.5 identifies the main reasons offered by both Participating and Nonparticipating Homebuyers for selecting a neighborhood.

Table 4.5: Main Reason for Selecting a Neighborhood

Main Reason	Nonparticipating Homebuyers	Participating Homebuyers
Better neighborhood/safer	20%	23%
Proximity to work	12%	9%
Better schools	12%	6%
Affordability	10%	9%
Proximity to relatives	4%	5%
Convenient transportation	4%	1%
Close to shopping	2%	1%
Low tax rates	0%	2%
Other	34%	41%

D. Home Selection

In the surveys, we asked Homebuyers to give us information on how they found the home that they selected and what factors contributed to home selection.

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1. Locating Homes

The survey asked homeowners to indicate whether ". . . any of the following information sources helped give you ideas for the home that you wanted to buy." The most common sources identified by Participating Homebuyers were builder open houses (56%), print advertisements (49%), real estate agents (44%), and friends or relatives (37%). Fewer than 10% of homebuyers report getting ideas from radio or television broadcasts, lenders, or utilities. A small, but probably growing percentage (15%) uses the Internet. The patterns are similar for Participating Homebuyers. Our subgroup analysis did not demonstrate any systematic patterns for different market segments.

Table 4.6: Information Sources for Home Purchase

Information Sources	Nonparticipating Homebuyers	Participating Homebuyers
Friends/Relatives	37%	41%
Newspaper/magazine	49%	44%
Radio show	2%	5%
TV show	7%	11%
Internet site	15%	14%
Home showing	30%	32%
Builder open house	56%	47%
Realtor	44%	32%
Lender/mortgage broker	8%	6%
Utility company	3%	6%
Other	13%	11%

It appears that homebuyers use their own personal network to find the neighborhoods in which they live (See Table 4.4). However, they use information from builders and real estate agents to decide which home to select within a neighborhood.

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2. Selecting Homes

The surveys asked homebuyers which market actors influenced their selection of a specific home.

A number of market agents have influence on the homebuyer's decision to purchase a specific home. Almost two thirds (62%) of Nonparticipating Homebuyers report that builders have a lot or some influence on the decision to purchase a given home. About one fifth (21%) of Nonparticipating Homebuyers identify real estate agents as having a lot or some influence, and 14% say the same about lending institutions.

Among Participating Homebuyers, over two thirds (69%) say that the builder had a lot or some influence on their decision to purchase their new home. A little more than a fifth identify real estate agents (22%) and lending institutions (21%) as having a lot or some influence in the decision to purchase a home. Also, 17% of Participating Homebuyers say that the utility company had a lot or some influence in their decision to buy a home.

The statistics on the influence of different market actors are reported in Table 4.7.

Table 4.7: Influence of Market Actors on Home Purchase Decision

Agent has "a lot" or "some influence	Nonparticipating Homebuyers	Participating Homebuyers
Builder	62%	69%
Real estate	21%	22%
Lender	14%	21%
Utility company	5%	17%
Homebuyer education class	4%	13%

Based on the survey results, it appears that homebuyers most often select a specific home because of the location, style, price, and size. Energy efficiency was not mention as a primary reason for purchasing a home, but a significant number of homebuyers reported that energy efficiency had a lot of influence on their

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decision to purchase. Table 4.8 summarizes the primary reasons that lead homebuyers to purchase a particular home.

Table 4.8: Factor Had "A Lot" of Influence on Home Purchase

Factor	Nonparticipating Homebuyers	Participating Homebuyers
Location	83%	73%
Appearance	70%	75%
Price	70%	62%
Size	65%	69%
Quality of Construction	74%	78%
Comfort	52%	71%
Availability of Upgrades	40%	45%
Mortgage Financing	32%	36%
Energy Efficiency	28%	39%

E. Projected Influence of RNC Program Incentives on Home Purchase

Homebuyers were asked to project how much influence specific incentives would have on "your decision to purchase a particular home." The incentives included "reduced mortgage interest rates," "reduced mortgage closing costs or fees," "utility rebates," and "utility company or EPA energy efficiency certification."

Almost two-thirds of homebuyers indicate that the availability of a reduced interest rate would have a lot of influence on their selection of a particular home, while only about one-fourth of homebuyers projected that energy efficiency certification would have a lot of influence. It is possible that these responses are actually a proxy for the perceived financial value of the listed incentives. Homebuyers perceive there interest rate reductions have a larger financial value than reduced mortgage costs and utility rebates.

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Table 4.9: Percent of Homebuyers Projecting "A Lot" of Influence from Listed Incentives

Response	Nonparticipating Homebuyers	Participating Homebuyers
Reduced mortgage rates	61%	36%
Reduced mortgage costs	48%	42%
Utility rebates	40%	4%
Energy efficiency certification	28%	8%

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V. Energy Efficiency In Home Purchase

It is clear from the surveys that energy efficiency does not dominate the home selection process. (See Table 4.8) However, that does not mean that homebuyers do not consider energy efficiency when they purchase homes. In the Participating and Nonparticipating Homebuyer surveys, we found that many homebuyers chose to increase the energy efficiency of their home through the purchase of upgrades to standard items. We also learned that most Nonparticipating Homebuyers perceive their home to be energy efficient.

A. Selecting Energy Efficient Homes

88% of Nonparticipating Homebuyers reported that they purchased a production home. This implies that most homebuyers were restricted to the energy efficiency standards and options offered by the builder.

Participating Homebuyers purchased a home that met the energy efficiency standards of the existing RNC program. However, only 15% of Participating Homebuyers actively sought out a builder who would build them a home that met the utility RNC program standards. About 10% of Participating Homebuyers purchased RNC certification as an upgrade to their home.

These survey results suggest that very few homebuyers currently seek an energy efficient home or have the ability to specify that their home is built to higher energy efficiency standards. However, at the same time, it appears that homebuyers can be sold energy efficient homes.

B. Energy Efficiency as an Upgrade

Since 88% of Nonparticipating Homebuyers purchased a production home, their options for increasing energy efficiency are limited to the choices offered by the Homebuilder. However, purchase of upgrades appears to be fairly common; 70% of Nonparticipating Homebuyers and 41% of Participating Homebuyers report that they purchase upgrades.

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Among Nonparticipating Homebuyers, the home's appearance and its resale value emerge as major concerns, but a significant percentage of this group is also concerned with energy efficiency. About one-third of Nonparticipating Homebuyers say that they purchased an upgrade that increased the energy efficiency of their home. This suggests that many homebuyers are willing to invest in energy efficiency to save on energy costs in the future.

Among Nonparticipating Homebuyers, only 27% of first-time homebuyers purchase energy efficiency upgrades, while 42% of repeat buyers bought energy efficiency upgrade packages. Buyers of more expensive homes (55%) and higher income buyers (44%) are also more likely to purchase energy efficiency upgrades.

Table 5.1 presents the percentage of homebuyers from each group purchasing each type of upgrade.

Table 5.1: Percentage Purchasing Upgrades by Type

Type of upgrade purchased	Nonparticipating Homebuyers	Participating Homebuyers
External appearance	28%	19%
Internal appearance	62%	27%
Square footage	25%	19%
Construction quality	25%	17%
Comfort	38%	20%
Resale value	55%	27%
Energy efficiency	33%	N/A
HVAC efficiency	30%	19%
Non-standard appliances	40%	22%

1. Types of Energy Efficiency Upgrades Purchased

Of Nonparticipating Homebuyers who purchased an energy efficiency upgrade package, about one third (30%) bought an improved heating and cooling system, while one fifth (18%) bought improved insulation for their new home. Table 5.2 summarized the different types of energy efficiency upgrades that Nonparticipating Homebuyers buy for their new homes.

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Table 5.2: Types of Energy Efficiency Upgrades (Nonparticipating Homebuyers)

Energy Efficiency Upgrades	Nonparticipating Homebuyers
Insulation	18%
Better doors/windows	5%
Heating & cooling equipment	30%
Bought energy efficiency package from builder/ENERGY STAR package	3%
Ceiling fans/attic fans	5%
Gas fireplace	4%
Two-zone hating	5%
Other	24%

2. Reasons for Purchasing Energy Efficiency Upgrade Packages

We asked Nonparticipating Homebuyers who bought energy efficiency upgrades to explain the reasons that led them to this purchase. Savings on energy bills emerges as the most important reason among Nonparticipating Homebuyers, but significant percentages report that their reason for the purchase was to improve the home's comfort or its indoor air quality.

Table 5.3: Reasons for Purchasing Energy Efficiency Upgrade Packages (Nonparticipating Homebuyers)

Reasons for Purchase of Energy Efficiency Upgrade	Nonparticipating Homebuyers
Save on energy bills/cost of energy too high	55%
More comfortable	26%
Better indoor air quality	11%
Better quality equipment/last longer/lower maintenance costs	5%
Higher resale value	3%
Environmentally conscious	1%
Other	9%

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C. Concerns About Energy Use

Most homebuyers show some concern about how much energy their home uses and the patterns are similar across the two homebuyer groups. Over two-thirds of Nonparticipating Homebuyers (71%) report that they worry "a lot" or "some" about the energy use of their home. Most Nonparticipating Homebuyers (84%) worry about the home's energy use because they want to save on energy bills or because they believe energy costs are too high. A few respondents report that they worry about the home's energy use for environmental reasons, because they want a more comfortable home, or because they fear an energy crisis. The patterns for Participating Homebuyers are similar.

Table 5.4: Reasons to Worry about Energy Use

Reason for worry	Nonparticipating Homebuyers	Participating Homebuyers
Lower energy bills/costs too high	84%	83%
Better environment	6%	6%
Energy crisis/shortage/dependence	4%	3%
Better quality equipment	1%	0%
Better indoor air quality	0%	1%
More comfortable home	2%	3%
Other	3%	4%

D. Energy Efficiency of the Home

In the surveys, we asked homebuyers to rate their homes compared to the "typical home." In general, we found that homebuyers perceived that their homes are "energy efficient."

1. Beliefs about Energy Consumption

Among Nonparticipating Homebuyers, 78% consider their home to be "energy efficient." More than half of those who consider their home to be energy efficient believe that it consumes at least 10% less energy than the typical home, and one-fourth believe that their home consumes at least 25% less energy than the typical home. These patterns hold across the various subgroups that we examined.

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Among Participating Homebuyers, 92% consider their home to be energy efficient. Over half (58%) believe that their home consumes at least 10% less than the typical home, and another third says that their home consumes at least 25% less than the typical home. Table 5.5 summarizes these findings.

Table 5.5: Homebuyer Beliefs about the Home's Energy Efficiency

Energy efficient home reduces bills by: (compared to typical home)	Nonparticipating Homebuyers	Participating Homebuyers
0-5%	7%	6%
6-10%	21%	15%
11-25%	26%	21%
More than 25%	25%	37%
Don't know	20%	22%

2. Cost of Implementing Energy Efficiency Measures

Nonparticipating Homebuyer survey respondents who thought that their homes were energy efficient had a range of opinions on the costs of energy efficiency. (Table 5.6) Twenty-two percent thought that measures to make the home energy efficient cost less than $500, while 13% thought that those measures would cost over $5,000. One-fourth (25%) of the survey respondents did not know the cost of implementing energy efficiency measures.

Nonparticipating Homebuyer survey respondents who thought that their homes were not energy efficient perceived that it would have cost a considerable amount to make them energy efficient. (Table 5.6) Only 4% thought that it would cost less than $500, while 14% thought it would have cost over $5,000.

Among Nonparticipating Homebuyers who think of their home as energy efficient, the median estimate of the cost of making their home energy efficient is $1,600. Nonparticipating Homebuyers who think that their home is not energy efficient had a much higher estimate of the cost of energy efficiency. The median estimate of the cost of making it energy efficient is $2,700

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Table 5.6: Cost of Energy Efficiency

Because of energy efficiency, the home's purchase price is increased by. . . .	"Think Home is Energy Efficient"	"Think Home is not Energy Efficient"
Did not increase at all	15%	4%
Less than $500	7%	0%
$500-$2,500	21%	32%
$2,500-$5,000	17%	25%
More than $5,000	13%	14%
Don't know	25%	25%

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VI. Homebuyer Relationship with Lenders

The relationship between homebuyers and lenders is important. Homebuyers identify lenders as a significant source of information about the housing market. Lenders are in a position to inform and educate homebuyers about specialized mortgage products such as energy efficient mortgages (EEM).

A. Sources of Information about Lenders

More than nine out of ten (91%) of the Nonparticipating Homebuyers borrowed funds from lending institutions to purchase a home. Almost one fourth (22%) learn about their lender from friends and family, about one fifth (17%) find out about their lender from a builder or contractor, and 11% find out from a real estate agent. As shown in table 6.1, other sources of information include other lenders (8%), newspaper and magazine advertisements (6%), store displays (1%), the internet (1%), and billboards (1%). The findings are similar for Participating Homebuyers.

Table 6.1: Sources of Information about Lenders

Source of Information	Nonparticipating Homebuyers	Participating Homebuyers
Friends/family	22%	28%
Builders/contractors	17%	10%
Real estate agents	11%	6%
Newspaper/magazine ads	6%	3%
Newspaper/magazine articles	1%	1%
Another lender	8%	4%
Utility company	0%	1%
Billboards	1%	2%
Store displays	1%	1%
Internet	2%	1%
Driving around	1%	1%

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B. Satisfaction with the Lender

Table 6.2 shows that among Nonparticipating Homebuyers, over half (54%) say that they are very satisfied and over a fourth (29%) say that they somewhat satisfied with their lender. Only 2% of Nonparticipating Homebuyers report being very dissatisfied with their lender. These patterns hold across the various subgroups that we examined for the study.

Homebuyer satisfaction with lending institutions is generally high. About two thirds (61%) of Participating Homebuyers are very satisfied with their lender and an additional 27% are somewhat satisfied. None of the Participating Homebuyers report being very dissatisfied with their lender.

Table 6.2: Satisfaction with Lender

Level of Satisfaction	Nonparticipating Homebuyers	Participating Homebuyers
Very satisfied	54%	61%
Somewhat satisfied	29%	27%
Somewhat dissatisfied	4%	5%
Very dissatisfied	2%	0%
Don't know	8%	5%

C. Awareness of Energy Efficient Mortgages (EEMs)

A very small percentage of both Participating and Non Participating Homebuyers have heard of EEMs. Among Participating Homebuyers, 7% report some knowledge of energy efficient mortgages, while among Nonparticipating Homebuyers the percentage is even lower, around three percent. One Participating Homebuyer reports having an EEM.

Homebuyers from both groups report similar sources of information about EEMs. Participating Homebuyers identify friends and relatives (18%), store displays (18%), utility companies (18%), builders (9%) and the Internet (9%) as their main sources of information about EEMs. Nonparticipating Homebuyers find out about EEMs from newspaper and magazine advertisements (40%), friends and family (20%), and from the Internet (20%).

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VII. Satisfaction with Home Purchase

We asked homebuyers to tell us their satisfaction with various aspects of their home. Of particular interest is the difference between satisfaction for Nonparticipating Homebuyers compared to Participating Homebuyers.

A. Satisfaction with Home Attributes

About half to two thirds Nonparticipating Homebuyers are very satisfied with each attribute of their home, except the neighborhood. Most Nonparticipating Homebuyers report being very satisfied with their neighborhood (84%) and the appearance of the home (85%). About half to two thirds are very satisfied with the home's quality of construction (53%), it's comfort level (68%), the indoor air quality (64%), and the home's noise level (61%). Only 48% of Nonparticipating Homebuyers report being very satisfied with the home's overall energy efficiency, and only 38% are very satisfied with the home's annual energy costs.

Participating Homebuyers are more satisfied the Nonparticipating Homebuyers on every attribute except for the neighborhood. They perceive that their homes are well built, comfortable, quiet, have good indoor air quality, and have low energy bills. In particular, significantly more households are very satisfied with the quality of construction, the indoor air quality, the noise level, the overall energy efficiency, and annual energy costs.

Table 7.1: Percentage Very Satisfied With. . .

Response	Nonparticipating Homebuyers	Participating Homebuyers
Neighborhood	84%	78%
Appearance of home	85%	88%
Quality of construction	53%	75%
Comfort level	68%	77%
Indoor air quality	64%	75%
Noise level	61%	74%
Overall energy efficiency	48%	74%
Annual energy costs	38%	53%
Overall	76%	85%

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B. Satisfaction with Energy Attributes

We asked homebuyers if their energy bills at their new home were what they had expected them to be. Among Nonparticipating Homebuyers, one fourth (25%) view their bills as lower than expected and another fourth (25%) as higher than expected. Almost half (48%) of Nonparticipating Homebuyers have energy bills that are about the same as they had expected. Significantly more Participating Homebuyers (39%) say that their energy bills are lower than what they had expected them to be, while another third (37%) report that their bills fall within what they had expected. Less than one fifth (18%) of Participating Homebuyers believe that their bills are higher than what they had expected them to be.

When comparing the energy costs of their new home to those of similar homes owned by friend or family, only a fourth (29%) of Nonparticipating Homebuyers believe that their energy bills are lower than those of similar homes. Almost half (49%) say that their energy bills are about the same as those of similar homes, and 15% report that they pay more for energy than owners of similar homes. Two-thirds (66%) of Participating Homebuyers report that their energy bills are lower. Sixteen percent say that their energy bills are about the same as those of other similar homes, and only 7% believe that they are paying more for energy than their friends and family.

Both Participating and Nonparticipating Homebuyers report high levels of satisfaction with their new homes. Eighty five percent of Participating Homebuyers and more than three fourths (76%) of Nonparticipating Homebuyers state that they are very satisfied with their new homes. Ninety one percent of Participating Homebuyers report that, in the future, if they need to buy a new home they will look for another program certified home.

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VIII. Recommendations for RNC Programs

The Homebuyer Surveys document the baseline status of the ENERGY STAR label and the existing utility RNC programs, offer insights into the factors that influence the purchase of a new home, and demonstrate the "energy awareness" of homebuyers. In this Section, we review the survey findings and suggest RNC program strategies that would build upon these findings.

A. Using the ENERGY STAR Label

The surveys demonstrated that about half of homebuyers are aware of the ENERGY STAR label. Homebuyers associate the ENERGY STAR label with energy-saving appliances. About one-third of homebuyers had purchased an ENERGY STAR appliance. About half of those who purchased an ENERGY STAR appliance were influenced to purchase it because of the ENERGY STAR label.

These findings demonstrate the value of using the ENERGY STAR label. It appears that there is significant, and probably growing awareness of the ENERGY STAR label. The utility RNC programs can take advantage of this name recognition to market their programs. However, since the existing RNC program names have some statewide recognition (25% for the Good Cents program and 22% for the EEH Five Star Program), it will be important for any marketing efforts to help consumers understand the transition from the existing program names to the new program name.

Homebuyers who are aware of the ENERGY STAR label associate it with saving energy. However, homebuyers appear to buy energy efficiency upgrades to save money. It may be important for marketing efforts to emphasize the money saving aspect of ENERGY STAR homes.

B. Marketing ENERGY STAR Homes

Many homebuyers are attempting to satisfy a specific need when they purchase a new home (e.g., a bigger home, a home in a better neighborhood, a smaller home). In their extensive search for a new home, they attempt to find a home with the right combination of

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features in the right neighborhood. While the energy efficiency of the a home can affect the purchase, it is clearly subordinate to a number of other concerns. Given the choice of two equivalent homes, the ENERGY STAR label may influence the home selection. However, it appears unlikely that the ENERGY STAR label would be enough to compensate for a home that was inadequate in other ways.

However, 70% of homebuyers reported that they purchased upgrades offered by builders and about 20% of homebuyers purchased an upgrade that increased the energy efficiency of their new home. It is clear that homebuyers want options that allow them to improve the quality of their homes and that they are willing to invest in energy efficiency at the time of purchase to save money on energy bills over the long run. By offering ENERGY STAR as an upgrade, builders would allow homebuyers to tailor a home to their own specifications and may increase the marketability of the products.

C. Documenting the Benefits of ENERGY STAR Homes

A significant number of new homebuyers purchased energy efficiency upgrades with their new homes. Most of the households (84%) reported that they purchased the upgrades to reduce energy costs. To the extent that the utility RNC programs can document the benefits of purchasing an ENERGY STAR home, particularly the cost savings compared to other production homes, it can be expected to assist builders in marketing ENERGY STAR homes.

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Residential New Construction Attitude and Awareness Baseline Study

The Affordable Housing Market in New Jersey

Prepared for the New Jersey Residential New Construction Working Group

April 2001

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Executive Summary

This Report presents the findings from our research on the Affordable Housing Market in New Jersey. This is part of New Jersey Residential New Construction Awareness and Attitudinal Baseline Study (RNC study). A summary report, entitled *Residential New Construction Attitude and Awareness Baseline Study-Integrated Summary: Report on Findings*, consolidates information from this and other research tasks conducted for the RNC Study.

A. Background

The New Jersey Residential New Construction Working Group (Working Group), which consists of Public Service Electric &Gas Company, GPU Energy, Conectiv Power Delivery, NUI Elizabethtown Gas Company, South Jersey Gas, Rockland Electric Company, and New Jersey Natural Gas Company, is charged with developing and implementing a coordinated, statewide utility residential new construction program that will increase the energy efficiency of new homes constructed in New Jersey. In support of that effort, the Working Group has commissioned a comprehensive study of New Jersey's residential new construction market with the following goals.

- *Baseline Measurement*: The primary objective of the study is to establish a baseline that documents the current market for ENERGY STAR homes.
- *Program Design and Implementation*: The secondary objective of the study is to enhance the Working Group's understanding of the residential new construction market.
- *Customer Sited Clean Generation*: In addition, this study will support the work of the Customer Sited Clean Generation Working Group (CSCG Working Group).

The Working Group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study.

This study contains information about the Affordable Housing Market in New Jersey. This information was compiled through a variety of sources, including state agency publications, Internet website information, and in-depth interviews with key Affordable Housing

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program administrators in New Jersey. The purpose of this report is to assist the Working Group with navigating through the complex system of administration of Affordable Housing programs in New Jersey, and to provide guidance about the key contact points on which the Working Group should concentrate.

B. Affordable Housing Market Actors

A number of different organizations influence the development of affordable housing in New Jersey. Government agencies provide housing subsidies, funding for housing and community development, and technical assistance. Nonprofit developers build and sometimes operate affordable housing developments. Other nonprofit organizations advocate for affordable housing and influence affordable housing policy. Banks and other investors invest in affordable housing projects.

1. Government Agencies

The New Jersey Department of Community Affairs (DCA) is the state agency with primary responsibility for affordable housing in New Jersey. Funding for affordable housing includes federal funds, state funds, private investment, and nonprofit contributions. However, most affordable housing development in New Jersey appears to be influenced in some way by DCA.

Several offices within DCA play key roles in the development of affordable housing.

- *Division of Housing and Community Resources*
- *Housing and Mortgage Finance Agency*
- *Council on Affordable Housing*

2. Other Market Actors

Other market actors are responsible for individual affordable housing developments, advocate for affordable housing funding and policies, and invest in affordable housing projects. These market actors include:

- *Nonprofit Housing Developers*
- *Other Nonprofit Organizations*
- *Banks and Other Investors*

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C. Division of Housing and Community Resources

The mission of the Division of Housing and Community Resources (DHCR) is to strengthen and revitalize communities by assisting in the delivery of affordable housing, by providing supportive services and by promoting community and economic development.

DHCR oversees three different types of programs:

1) *Housing Assistance Programs*: Funded mainly by the U.S. Department of Housing and Urban Development (HUD), these programs address the housing needs of the homeless and potential homeless and provides housing assistance to eligible households.

2) *Housing Production and Community Development Programs*: These programs, funded by grants-in-aid, provide funding to municipalities, nonprofit and for-profit developers for housing production and rehabilitation of existing housing units for low and moderate income households.

3) *Housing and Community Support Programs*: These programs provide funding and technical support to municipalities, nonprofit organizations, Community Action Agencies (CAAs) and for-profit developers.

DHCR also comprises a number of operations and administrative departments, the most important of which is the Office of Research and Policy Development (ORPD). This office is responsible for identifying and pursuing federal and foundation grant funds to supplement the division's initiatives.

Of the three different types of programs support by DHCR, it seems that the housing production and community development programs offer the greatest opportunity to the utility RNC programs. In fact, PSE&G's initiatives in this area have already contributed to the development of ENERGY STAR qualified affordable housing and, in part, led to the development of the New Jersey Green Homes Office. We recommend that the utility RNC programs continue to develop those relationships as its primary focus in the affordable housing market.

D. Housing Mortgage and Finance Authority

The New Jersey Housing and Mortgage Finance Agency (HMFA) is in, but not of the New Jersey Department of Community Affairs.

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HMFA exercises essential governmental functions to promote the construction and rehabilitation of both rental and owner-occupied housing. The Agency's programs are designed to increase the opportunities for affordable housing by families and the elderly, to work with the private sector in meeting the above needs, to assist in urban revitalization and to develop innovative and flexible financing vehicles which will be responsive to the changing needs of the population. While the primary mechanism for achieving the above goal is the granting of low-interest mortgages financed by the sale of bonds, the HMFA can also serve as a conduit for various federal and state grants and demonstration funds.

The activities of the HMFA are governed by a seven-member board consisting of the Commissioner of the Department of Community Affairs, the State Treasurer, the Attorney General, the Commissioner of Banking and Insurance and three public members appointed by the Governor with the consent of the Senate. The day-to-day operations are carried out by an Executive Director assisted by staff organized into several Divisions.

The New Jersey Housing and Mortgage Finance Agency raises program funds by:

- selling taxable and tax-exempt bonds to private sector investors in national financial markets;
- applying for and administering federal and state grants and housing assistance programs; and
- fostering cooperative relationships with state, municipal, not-for-profit agencies and foundations.

The New Jersey Housing and Mortgage Finance Agency does not rely on any direct funding from the state Treasury to meet its core operating or administrative expenses.

The programs administered by HMFA offer the utility RNC programs a number of opportunities for both the new home and resale markets.

1. Single Family Home Loans

Currently, HMFA's Single Family Division programs offer a number of different below-market interest loans packages with attractive terms to low and moderate income homebuyers that are first-time homebuyers or who buy in an urban area. These loans are available for both new and existing homes. In addition, HMFA offers some special loan packages for homes in certain

neighborhoods. The following are some ways the utility RNC programs might use these mortgage products.

1) *100% Loan-to-Value Mortgages*: HMFA offers the Mortgage Opportunity Program to certain homebuyers. The program allows borrowers to finance the full purchase price of a home. The utility RNC programs could ask HMFA to include low and moderate income ENERGY STAR homes in that program.

2) *5% Mortgages*: Periodically, HMFA is able to offer 5% mortgages for special purposes. The "Too Good But It's True Program" for example, offered to such mortgages to homebuyers purchasing in designated neighborhoods of selected cities. The utility RNC programs might ask HMFA to offer such an incentive for low income affordable ENERGY STAR housing in other areas. The lower interest rate would more than cover the cost of ENERGY STAR improvements.

3) *Home Plus Program*: Under this program, the homebuyer can include up to $15,000 in home repairs and improvements in the first mortgage on the home. Under existing program guidelines, utility RNC programs could encourage qualified buyers of existing homes to made energy efficiency upgrades at the time of purchase.

4) *UHORP Program*: This program furnishes financing and subsidies for the construction of new, affordable housing. Developers compete for UHORP funding. The utility RNC programs could encourage HMFA to require ENERGY STAR as the minimum energy efficiency standard for development applications.

We are aware that some initiatives have already been proposed and are being implemented under the existing utility RNC programs. We would recommend that these efforts continue.

2. Multifamily Programs

HMFA offers both construction financing and permanent financing for low- and moderate-income multifamily rental housing. HMFA also administers the federal low-income housing tax credit program. Since developers compete for financing in both programs, development applications usually

pay attention to energy efficiency so that they can minimize living costs for low-income households. However, it may be appropriate for the utility RNC program to work with HMFA to encourage them to use ENERGY STAR as the standard for all applications.

E. Council on Affordable Housing

The Council on Affordable Housing (COAH) was created by the Fair Housing Act of 1985 as the State Legislature's response to a series of New Jersey Supreme Court cases known as the Mount Laurel decisions. The Supreme Court established a constitutional obligation for each of the 566 municipalities in the state to establish a realistic opportunity for the provision of fair share low and moderate income housing obligations, generally through land use and zoning powers. The legislature provided an administrative alternative to this constitutional obligation via the Fair Housing Act.

COAH establishes each municipality's fair share of affordable housing, certifies municipal fair share plans, and administers regional contribution agreements. It focuses on number of affordable units, not types and has no authority to specify the type of affordable housing units constructed. As such, it does not appear that there is any opportunity for utility RNC programs to intervene in the new housing market through COAH.

F. Other Affordable Housing Market Actors

A number of other organizations play important roles in the affordable housing market. These include nonprofit housing developers, other nonprofit organizations, and banks and other investors. In general, government agencies control the funding for and establish the policies for affordable housing. Therefore the primary focus for the utility RNC programs should be on those agencies. However, it is important for the utility RNC programs to be aware of the roles played by other affordable housing market actors.

1. Nonprofit Housing Developers

The primary role of nonprofit housing developers is to design, construct, and, in some cases, manage affordable housing projects. The developers usually put together a number of financing sources for a project and often must submit a

competitive application to DCA or HMFA to obtain funding and/or financing for a project. The Affordable Housing Network of New Jersey lists over 100 nonprofit housing and community development corporation members on its web site.

2. Other Nonprofit Organizations

A number of other nonprofit organizations that work in the affordable housing area, including New Jersey Citizen Action and the New Jersey Affordable Housing Network.

3. Banks and Other Investors

A number of different types of investors participate in the federal low-income housing tax credit program that is administered by HMFA's multifamily housing program office. In New Jersey's program, an affordable housing developer gets "tax credit points" approved by HMFA. Garden State Affordable Housing acts as a "Tax Credit Equity Syndicator" and serves as an intermediary between the developer and the investor. Many banks invest in low-income housing to fulfill requirements under the Community Reinvestment Act, 1977.

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I. Introduction

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The Working Group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study.

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B. Study Goals and Objectives

The purpose of this study is to develop information on affordable housing programs. New Jersey's affordable housing have been very receptive to the existing RNC programs and to the ENERGY STAR program. The Working Group is interested in knowing which programs and organizations present the best opportunities for influencing energy standards for newly constructed affordable housing.

C. Study Methodology

This report contains information about the Affordable Housing Market in New Jersey that was compiled through a variety of sources, including state agency publications, internet website information, and in-depth interviews with key Affordable Housing program administrators in New Jersey. The following list identifies that names and affiliations of individuals who furnished information for this report.

- Darren Port, Director, New Jersey Green Homes Office
- Jerome Keelan, Director of Single Family Programs, HMFA
- Greg Adkins, Chief of Policy and Planning, HFMA
- Paul Ceppi, Single Family Programs Division, HFMA
- Marty Bernstein, Multifamily Programs Division, HFMA
- Mary Abernathy, New Community Corporation
- Joseph Selzer, Garden State Affordable Housing
- Phyllis Salow-Kaye, New Jersey Citizen Action
- Cheryl Davis, Community Develop Officer for NJ, Fleet Bank

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II. Affordable Housing Market Actors

A number of different organizations influence the development of affordable housing in New Jersey. Government agencies provide housing subsidies, funding for housing and community development, and technical assistance. Nonprofit developers build and sometimes operate affordable housing developments. Other nonprofit organizations advocate for affordable housing and influence affordable housing policy. Banks and other investors invest in affordable housing projects. In this section of the report, we furnish an overview of the market actors and their roles in the affordable housing market.

A. Government Agencies

The New Jersey Department of Community Affairs (DCA) is the state agency with primary responsibility for affordable housing in New Jersey. Funding for affordable housing includes federal funds, state funds, private investment, and nonprofit contributions. However, most affordable housing development in New Jersey appears to be influenced in some way by DCA.

Several offices within DCA play key roles in the development of affordable housing.

- *Division of Housing and Community Resources*: The mission of DHCR is to strengthen and revitalize communities by assisting in the delivery of affordable housing, by providing supportive services, and by promoting community and economic redevelopment.
- *Housing and Mortgage Finance Agency*: The HMFA promotes construction and rehabilitation of rental and owner-occupied housing. While its primary mechanism is distribution of low-interest mortgages financed by the sale of bonds, the HMFA also serves as a conduit for various federal and state grants and demonstration funds.
- *Council on Affordable Housing*: COAH is an administrative and regulatory organization. It defines housing regions, estimates affordable housing needs, sets criteria for assessing a municipality's fair share of affordable housing, and reviews

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and approves fair share housing plans, including regional contribution agreements.

Each of these offices has a separate mission that will be discussed in greater detail in the sections of the report that follow.

B. Other Market Actors

Other market actors tend to influence individual affordable housing developments and/or to advocate for affordable housing funding and policies. These market actors include:

- *Nonprofit Housing Developers*: These developers are often community-based organizations. As such, they may have a narrow mission that is restricted to the development of affordable housing for a particular market segment (e.g., disabled households) or may have a broader mission that covers all aspects of community development. These developers compete for the funds available for affordable housing.
- *Other Nonprofit Organizations*: These organizations advocate for affordable housing. Some focus on affordable housing, while others have a broader mandate.
- *Banks and Other Investors*: Banks tend to invest in affordable housing projects to meet requirements under the Community Reinvestment Act. Other investors invest in affordable housing to obtain federal tax credits.

Each of these organizations plays a role in the development of affordable housing. In this report, we list some of these organizations and discuss the context for their participation in the affordable housing market.

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III. Division of Housing and Community Resources

The mission of the Division of Housing and Community Resources (DHCR) is to strengthen and revitalize communities by assisting in the delivery of affordable housing, by providing supportive services and by promoting community and economic development.

DHCR provides information, training and technical assistance for housing development to municipalities, non-profit organizations and private developers in order to encourage and facilitate the construction of affordable housing for low and moderate income families, and people with special needs, both the disabled and the elderly. The division is also responsible for planning and implementing programs that provide rental housing assistance, and that support neighborhood preservation and community development initiatives. It also provides financial and technical assistance to community-based nonprofit and local government agencies.

DHCR oversees three different types of programs:

1) *Housing Assistance Programs*: Funded[1] by the U.S. Department of Housing and Urban Development (HUD), these programs address the housing needs of the homeless and potential homeless and provides housing assistance to eligible households.

2) *Housing Production and Community Development Programs*: These programs, funded by grants-in-aid, provide funding to municipalities, nonprofit and for-profit developers for housing production and rehabilitation of existing housing units for low and moderate income households.

3) *Housing and Community Support Programs*: These programs provide funding and technical support to municipalities, nonprofit organizations, Community Action Agencies (CAAs) and for-profit developer. Furthermore, in conjunction with the Office of Research and Policy development (also under DHCR), programs in this category are responsible for development of the State's Consolidated and Fair Housing Plans, researching and designing new programs and initiatives and seeking federal and foundation funding to supplement current state and local financing. Programs

[1] We have not always been able to ascertain the amount of annual funding for housing programs. For those cases where funding information is available, we have included it in the program description.

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in this group also administer New Jersey's housing affordability controls.

DHCR also comprises a number of operations and administrative departments, the most important of which is the Office of Research and Policy Development (ORPD). This office is responsible for identifying and pursuing federal and foundation grant funds to supplement the division's initiatives. ORPD is also responsible for preparing the State's Consolidated Plan (a five-year plan that identifies New Jersey's needs for affordable housing and supportive services, and outlines a strategy for addressing those needs), and the Fair Housing Plan (a plan that identifies the impediments to fair housing choice, and presents a strategy for addressing the same). In addition, ORPD is responsible for administration of the State's HOME Program and the Public Housing Authority Training Program, and for maintaining the Division's web site.

A. Housing Assistance Programs

These programs seek to prevent homelessness by providing a series of services such as counseling, job training, education and social services to low income households. A number of these programs provide rental assistance either as part of a package of services, or in cooperation with other programs.

1. Family Self-Sufficiency Program

This program which is funded by the U.S. HUD, assists families in becoming self-sufficient and self-reliant through the implementation of a jointly developed action plan. Rental assistance is provided to families who agree to participate in a series of job training, career counseling, education and social service programs. In connection with this program, assistance also is provided by the Department of Human Services. Rental assistance is offered to very low income families.

The program uses the same guidelines as the Section 8 Certificate and Housing Voucher Programs. The program recruits participants through an outreach conducted among current participants in the Department's Section 8 Housing Program.

2. Homelessness Prevention Program

The result of Public Law 1984, c.180, this program assists low and moderate income tenants and homeowners who are in

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imminent danger of eviction or foreclosure due to temporary financial problems. Funding from this program is used to disburse payments in the form of loans or grants to landlords and mortgage companies on behalf of eligible households.

3. HOME – Tenant Based Rental Assistance

This U.S. HUD funded program provides tenant-based rental assistance to low and moderate income families with special needs and in some cases, to eligible, in-place residents of a rental project being rehabilitated under the HOME Program.

Eligible households are those who have graduated from Transitional Housing programs that meet the Division of Housing and Community Resources' guidelines for such programs, and households, where the head of household is elderly or disabled.

4. Housing Vouchers

This program, funded by U.S. HUD, provides housing assistance to eligible low-income families by subsidizing a portion of each tenant's monthly rent and paying directly to the property owner. The amount of financial assistance each household receives is based on family size and income.

5. Section 8 – Existing Housing

The purpose of this U.S. HUD funded program is to help very low income families, or low income elderly or disabled individuals to afford safe and sanitary housing in the private rental market. The program provides direct rent subsidy payments to landlords which is calculated based on the premise that a family should not pay more than 30% of its monthly income for housing. Funding is provided on an annual basis.

This statewide program is available to residents of all New Jersey counties. Additional Section 8 Existing Housing programs are administered throughout the State by a number of municipal and county housing authorities.

B. Housing Production and Community Development Programs

The Housing Production and Community Development Programs combines a number of state and federal programs that provide funding

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to developers, municipalities and low income homeowners. The purpose of these programs is to improve to quality of housing available to moderate and low income households.

1. Balanced Housing Neighborhood Preservation Program

This program was established in conformance with the Fair Housing Act of 1985 and the Mount Laurel Decision of the New Jersey Supreme Court. The purpose of this program is to financially support New Jersey's municipalities with grants and loans in their efforts to provide adequate affordable housing to low and moderate income households. The program is funded through the New Jersey Realty Transfer Tax and state appropriations.

Eligible municipalities must fall into one of the following categories:

- they have received COAH certification;
- they are subject to court-ordered builder's remedy,
- they have entered into a judicially-approved compliance agreement to settle their fair share housing obligations;
- they have been designated as a receiving municipality under a Regional Contribution Agreement (RCA);
- or, they have been eligible to receive state aid since 1988.

In 1998, DCA established maximum acceptable per-unit costs for projects to be funded, as well as maximum allowable project fees for developers. Table 4.1 provides details on the maximum per-unit costs that DCA views as acceptable.

4.1 Maximum Pre-Unit Costs

Studio	One BR	Two BR	Three BR	Four BR
$95,000	$112,000	$120,000	$129,000	$137,000

Table 4.2 identifies the maximum allowable developer fees. The allowable fees differ with the type of unit (rental or for ownership) and with the location of the development. Urban aid municipalities and targeted areas receive higher levels of funding than other municipalities.

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4.2 Maximum Project Fees (for developers)

Unit Size	New To Own Units not located in Targeted Areas	New Rental Units Not in Targeted Areas	New Rental Units in Targeted Areas	New To-Own Units in Targeted Areas
Studio	—	$5,000	$7,000	—
One BR	$5,000	$7,000	$9,000	$10,000
Two BR	$6,000	$8,000	$10,000	$11,000
Three BR	$7,000	$9,000	$11,000	$12,000
Four + BR	$8,000	$10,000	$12,000	$13,000

2. Downtown Living Program

The Downtown Living program, also funded through the New Jersey Realty Transfer Tax, provides low-interest loans to help stimulate the development of market-rate rental housing in New Jersey's urban communities. The loans are offered to for-profit and nonprofit developers who can demonstrate that their market-rate rental project can be integrated with or stimulate the growth of other development projects such as retail or office projects. Projects funded by the Downtown Living Program must be located within specific municipalities that participate in the Governor's Urban Coordinating Council (UCC) programs or SNAP, or are Urban Aid or UHORP municipalities. Priority is given to those projects located within a UCC or SNAP designated neighborhood.

3. HOME Program

HOME is a U.S. HUD funded and state administered program that supports the development of quality affordable housing for low and moderate income families through seven sub-programs which include:

- *The Investment Partnership Program*: designed to increase the supply and quality of affordable housing through strengthening public-private partnerships;
- *The Housing Production Investment Fund*: a program that provides low interest loans, grants, and interest subsidies to

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for-profit and nonprofit developers of affordable housing in New Jersey;

- *The Neighborhood Preservation Program*: designed to provide financial assistance to property owners in select municipalities for the rehabilitation of substandard housing;
- *The Rental Rehabilitation Program*: which provides deferred payment loans to property owners, including nonprofits, for the rehabilitation of substandard rental housing units.

Other HOME subprograms include the Community Housing Development Organizations Fund and the Community Housing Development Organizations Operating Grants, both of which are administered by the Housing and Community Support Division of the DCA.

4. Section : Single Occupancy – Moderate Rehabilitation

The Section 8 Single Room Occupancy program is a federally funded program that assists in the rehabilitation of privately owned, substandard single room occupancy rental units. The purpose of the program is to provide affordable quality housing to the homeless and to very low income individuals. The program provides funding of at least $3,000 per unit to owners of substandard rental properties. Upon the completion of the rehabilitation work, the project owner receives financial assistance for a ten-year period. This assistance is administered by the Housing Assistance Element in the form of Section 8 rental assistance.

5. Small Cities Community Development Block Grant

The Small Cities Community Development Block Grant provides funding for economic development and for the rehabilitation of substandard housing to non-entitlement municipalities and counties that are not eligible for state funding.

C. Housing and Community Support Programs

The Housing and Community Support Programs include a number of funding programs and some organizations that provide technical and other assistance to nonprofit housing associations.

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1. Affordable Housing Training Institute

AHTI collaborates with nonprofit housing associations to develop and fund workshops for member organizations and also organizes its own training workshops. All AHTI programs and workshops are designed to increase the expertise in a variety of areas dealing with affordable housing and management of the staff of nonprofit housing developers, for-profit developers, special needs housing and service organizations, and municipalities. The AHTI receives funding from the Revolving Housing Demonstration Program and from First Union Bank.

2. Community Housing Development Organizations (CHDO) Seed Money Loans

This program provides pre-development/seed money loans to nonprofit organizations that are actively involved in the development of affordable housing and are certified by the State as CHDOs. The funds for the Seed Money Loan Program are provided by the U.S. H.U.D. HOME program.

3. HOME- Community Housing Development Organizations Fund

This subprogram of the HOME program provides grants and loans to nonprofit agencies designated as CHDOs for the purpose of developing affordable housing. Ninety percent of the funding is reserved for the creation of housing owned, developed or operated by the CHDOs. The remaining 10% is sued for special projects, technical assistance and seed money.

4. HOME Community Housing Development Organizations Operating Grant

This HOME subprogram provides operating support in the form of grants and loans to State certified CHDOs that are actively involved in the development of affordable housing.

5. Office of Housing Advocacy

The Office of Housing Advocacy provides technical assistance to nonprofits, for profit corporations, and municipalities interested in developing or preserving affordable housing in the state of New Jersey. The type of assistance offered may include a project

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feasibility review, referral to capital funding sources and coordination with financial institutions.

6. Partnership Awards

The purpose of this awards program is to encourage cooperation and partnerships among different organizations that develop affordable housing in New Jersey. The program, which is funded through the Revolving Housing Demonstration Program, provides grants to nonprofit organizations that are actively involved with the development of affordable housing in partnership with either a for-profit or nonprofit entity.

D. Program Recommendations

Of the three different kinds of programs outlined above, it seems that the housing production and community development programs offer the greatest opportunity to the utility RNC programs. In fact, PSE&G's initiatives in this area have already contributed to the development of ENERGY STAR qualified affordable housing and, in part, led to the development of the New Jersey Green Homes Office. The utility RNC programs should continue to develop those relationships.

1. Sustainable Development/Affordable Housing Pilot Program

The purpose of the Sustainable Development/Affordable Housing Pilot Program, an initiative of the New Jersey Department of Community Affairs (DCA) in collaboration with New Jersey's largest utility, Public Service Electric and Gas Company (PSE&G.), is to determine how to incorporate sustainable design principles and energy efficiency into affordable housing. Also participating in this effort are the New Jersey Housing and Mortgage Finance Agency, the New Jersey Department of Environmental Protection, the U.S. Environmental Protection Agency, the State Energy Office and the New Jersey Commerce and Economic Growth Commission.

The goals of the program are:

1) To promote implementation of the New Jersey Development and Redevelopment Plan by applying proven energy efficient technologies and environmentally sensitive construction practices and materials.

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2) To encourage developing municipalities to provide affordable housing by demonstrating that it can be attractive and an asset to the community.

3) To encourage site selection, site planning and building design which minimize the impact on environmental quality and limit emissions of greenhouse gases.

4) To promote a market transforming approach to energy and resource-efficient design, construction and methodologies for conserving other natural resources.

5) To produce housing for low and moderate income households that is highly energy efficient, cost efficient and easy to maintain.

In November, 1998, DCA published a Request for Proposals seeking housing development teams to design and construct housing that is affordable, highly energy efficient and meets sustainable development criteria. New construction, substantial rehabilitation and conversion were eligible activities. DCA was seeking creative approaches that use a combination of various proven techniques, including consideration of market-ready, state-of-the-art technologies that meet the program goals. Developers were encouraged to team up with professional consultants, planners, architects and builders experienced in sustainable design. Applicants were directed to employ specific sustainable design strategies to as great an extent as possible within the constraints of site and cost.

In 1999, eight projects were announced as recipients of pilot funding. One project is currently under construction.

Pilot Program projects received several types of assistance:

- The State-financed Balanced Housing Program furnished subsidy up to $11 million;
- The PSE&G Energy Efficient Home (EEH) *5 Star* Program provided builders with financial incentives to offset typical incremental costs of energy efficiency upgrades. Amounts range from $1200 to $2500 per unit;
- Up to $5 million in low-interest single family mortgages has been committed by the New Jersey Housing and Mortgage Finance Agency;

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- $200,000 has been committed by the State Energy Office to design and incorporate passive or active solar technologies.

Developers have received ongoing technical assistance and logistical support from: Vermont Energy Investment Corporation of Burlington, Vermont, consultants to PSE&G; Steven Winter Associates of Norwalk, Connecticut under the Partnership for Advancing Technology in Housing (PATH) a program administered by HUD; and the New Jersey Sustainable Business Office.

2. New Jersey Green Homes Office

The New Jersey Green Homes Office aspires to be the main link between housing developers and state/federal sources of funding for housing projects. As such is an important contact point and source of reference for the Working Group.

The mission of the New Jersey Green Homes Office is to fundamentally improve the environmental performance, energy efficiency, quality and affordability of housing in New Jersey. Situated within the Division of Housing and Community Affairs of the DCA, the New Jersey Green Homes Office provides advocacy services, education programs, and technical assistance to housing developers. The purpose of these programs is to accelerate the use of innovative green design and building technologies, raise building standards and create a consumer demand for efficient high performance homes.

The Green Homes Office is an outcome of the Sustainable Development Affordable Housing Pilot Program initiated by DCA in partnership with PSE&G in 1998. The purpose of this program has been to determine how to incorporate sustainable design principles and energy efficiency into affordable housing.

The Green Homes Office has recently launched a number of initiatives, the most important of which are:

- Development of minimum green building construction specifications for developers seeking state funding;
- Establishment of a financial incentives program to offset solar installation costs;
- Support of energy efficient mortgage programs and mortgage service providers;

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- Development of a statewide system for the certification of home energy raters;
- Development of a green building/energy efficiency advertising campaign.

It seems appropriate for the utility RNC programs to build upon the work already done in this area. As such, the RNC programs should support and supplement the work of the New Jersey Green Homes Office.

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IV. Housing Mortgage and Finance Authority (HMFA)

The New Jersey Housing and Mortgage Finance Agency (HMFA) was created in 1967 as the Housing Finance Agency (HFA) for the purpose of increasing the supply of safe, decent and affordable multifamily housing for the low- and moderate-income citizens of this state. In 1984, the Housing Finance Agency and its sister agency, the New Jersey Mortgage Finance Agency, whose charge was to promote the construction and rehabilitation of owner-occupied housing, were merged. The merger of the two agencies has created a consolidated statewide force to meet the challenge of providing affordable housing.

As a body corporate and politic, in, but not of the New Jersey Department of Community Affairs, the HMFA exercises essential governmental functions to promote the construction and rehabilitation of both rental and owner-occupied housing. The Agency's programs are designed to increase the opportunities for affordable housing by families and the elderly, to work with the private sector in meeting the above needs, to assist in urban revitalization and to develop innovative and flexible financing vehicles which will be responsive to the changing needs of the population. While the primary mechanism for achieving the above goal is the granting of low-interest mortgages financed by the sale of bonds, the HMFA can also serve as a conduit for various federal and state grants and demonstration funds.

The activities of the HMFA are governed by a seven-member board consisting of the Commissioner of the Department of Community Affairs, the State Treasurer, the Attorney General, the Commissioner of Banking and Insurance and three public members appointed by the Governor with the consent of the Senate. The day-to-day operations are carried out by an Executive Director assisted by staff organized into several Divisions.

The New Jersey Housing and Mortgage Finance Agency raises program funds by:

- selling taxable and tax-exempt bonds to private sector investors in national financial markets;
- applying for and administering federal and state grants and housing assistance programs; and
- fostering cooperative relationships with state, municipal, not-for-profit agencies and foundations.

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The New Jersey Housing and Mortgage Finance Agency does not rely on any direct funding from the state Treasury to meet its core operating or administrative expenses.

A. Subsidiary Corporations

The HMFA has formed two separate subsidiary corporations, the Statewide Acquisition and Redevelopment Corporation ("STAR"), and the A Better Camden Corporation ("ABC"). These subsidiaries have all of the powers of the Agency except that they cannot contract indebtedness without the express consent of the Agency Board. Both STAR and ABC have Boards of Trustees, and both receive staff support from Agency employees. Pursuant to the Agency's statute, the Executive Director of the Agency is automatically the President of each subsidiary.

1. STAR Corporation

The STAR Corporation was formed in April 1996 primarily in order to facilitate the development of the Agency's Scattered Site AIDS Permanent Housing program, the SHORE-EASY program, and the redevelopment of the Amity Village I and II projects.

2. ABC Corporation

The ABC (A Better Camden) Corporation was formed in April 1997 to facilitate the implementation of the Camden Initiative which is a coordinated effort among the Agency, the Department of Community Affairs, the New Jersey Department of Environmental Protection and the New Jersey Economic Development Authority to stimulate housing and economic development in the City of Camden.

B. HMFA Single Family Division Programs

HMFA has a number of homeownership programs that serve primarily the low, moderate and middle income first-time homebuyers and urban homebuyers[2]. These programs are supervised by the Agency's Single Family Division. Most HMFA homeownership loans are originated by private lenders that are approved to participate

[2] HMFA does not require urban homebuyers to be first-time homebuyers.

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in the Agency's programs. Single family is the HMFA's focal point for construction financing and subsidy.

1. The Home Buyer Mortgage Program

This is the Agency's largest and most important program. First-time homebuyers and urban area buyers are eligible to receive a below-market, fixed interest rate, 30-year mortgages. The homebuyer must provide a down-payment of as little as 3% from his/her own assets.

In 1999, the Agency provided home ownership loans totaling more than $140 million to 1,473 first –time homebuyers throughout the state.

2. Homeownership for Performing Employees (HOPE)

HOPE is an employer guaranteed loan program that offers no down-payment, below-market, fixed rate mortgages to eligible employees without private mortgage insurance. Employers must be approved by the HMFA. The program adheres to the same mortgage program requirements as the Homebuyer Program. Any size company can participate. The employer can establish qualifications in addition to HMFA program restrictions.

3. Home-Plus Program

A fixed interest rate home mortgage to qualified first-time and urban area home buyers with immediate home improvement needs. Homeowners are allowed to finance up to $15,000 toward home repairs and improvements as part of the first mortgage. Improvements allowed include replacing a roof, painting, installing improved heating or air conditioning systems, renovating a kitchen or bath, renovating plumbing or electrical systems and enlarging rooms. It is important to note that energy conservation and solar energy improvements are also eligible for funding under the Home-Plus program.

4. Mortgage Opportunity Program (MOP)

The Mortgage Opportunity Program (MOP) is available to first time homebuyers and urban homebuyers who meet certain income guidelines. Eligible properties include newly constructed, fee-simple, non-condominium housing units in statewide and

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urban areas. The mortgage loan is offered at the prevailing fixed interest rate for a term of 30 years. Borrowers may finance the full purchase price, as well as closing costs, provided the Loan-to-Value (LTV) does not exceed 100%. Borrowers must have funds to cover escrows required at settlement.

5. 100% Mortgage Program

The 100% Mortgage Program provides no down-payment, no mortgage insurance, mortgage loans at Agency-approved new or rehabilitated single-family housing developments and for certain newly constructed units. First-time and urban area buyers are eligible for 30-year fixed rate financing at the HMFA's prevailing interest rate. The program is subject to funding and housing availability. One Hundred Percent financing is available only when purchasing homes pre-approved by the Agency and listed on the One Hundred Percent Project List. Not-for-profit and for-profit developers can apply for project approval.

6. Purchase/Rehabilitation Mortgage Program

Qualified first-time home buyers and urban target area buyers can receive below-market interest rate financing for the purchase and rehabilitation of a home, or the rehabilitation of a presently owned home. Seventy-five percent of the home's existing external walls and interior structural framework must remain in place as part of the rehabilitation.

7. Too Good But It's True Program

The "Too Good, But It's True" Mortgage Program offers 5% 30 year fixed rate mortgages with zero points to home buyers purchasing in designated neighborhoods of selected cities which have been identified by the Urban Coordinating Council (UCC). Funds are unavailable at this time. The Agency anticipates the release of new funds at some unspecified point in the future.

8. Urban Home Ownership Recovery program (UHORP)

Unlike the other Single Family Division programs that provide funding to individual homebuyers, this program provides construction financing for developers of urban for-sale housing. It also includes access to subsidy pool money (Housing Incentive

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Fund) and HMFA homebuyer mortgage programs. A number of resale restrictions apply on subsidized units.

UHORP's purpose is to positively impact neighborhood development and provide a mix of market homeownership units in urban areas. From 1996 through 1999, 1,800 total units (including rentals) have been committed for construction in 59 projects in 21 cities under the UHORP Program.

C. Multifamily Division Programs

In an effort to provide affordable rental housing to low income households, the HMFA, through its Multifamily Division Programs, provides financial support to for-profit and nonprofit housing developers. This division supervises the Agency's construction loan programs and the federal low-income housing tax credit program.

1. Construction Loans

The Agency offers two types of multi-family housing mortgage loan programs:

1. permanent takeout financing;
2. construction loans that convert to permanent financing

These construction loans are financed through the sale of tax-exempt and taxable bonds. In 1999, the Agency issued $37.7 million in triple-A rated multi-family housing revenue bonds. Proceeds from the bond sale provided the construction or permanent financing of 895 units of multi-family rental housing in eight developments throughout the state.

The Agency's multifamily programs division has worked with PSE&G on the rehabilitation of one development, The Berkeley in Orange. This was the first project to receive PSE&G recognition as an energy efficient development.

2. Federal Low Income Tax Credit Program

The federal low income housing tax credit was enacted in 1986 and it provides a dollar for dollar for reduction in federal tax liability to developers of affordable housing. While the federal code requires a minimum affordability period of 15 years, New Jersey typically requires 45 year income and rent restrictions.

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Affordability is defined as either 60% or 50^ of county median income adjusted for family size.

Each state is vested with $1.25 worth of credits per capita. New Jersey's authority was approximately $10.3 million in 2000. Since the low income credit is a ten year credit, the value is $103 million.

Given the success of the program and in spite of complex application and certification procedures, demand for credits exceeds supply by three to one. The Agency currently oversees 350 tax credit developments with over 15,000 units, and assists with the rehabilitation or construction of approximately 20 projects per year.

D. Recommendations

The programs administered by HMFA offer the utility RNC programs a number of opportunities for both the new home and resale markets.

1. Single Family Home Loans

Currently, HMFA's Single Family Division programs offer a number of different below-market interest loans packages with attractive terms to low and moderate income homebuyers that are first-time homebuyers or who buy in an urban area. These loans are available for both new and existing homes. In addition, HMFA offers some special loan packages for homes in certain neighborhoods. The following are some ways the utility RNC programs might use these mortgage products.

5) *100% Loan-to-Value Mortgages*: HMFA offers the Mortgage Opportunity Program to certain homebuyers. The program allows borrowers to finance the full purchase price of a home. The utility RNC programs could ask HMFA to include low and moderate income ENERGY STAR homes in that program.

6) *5% Mortgages*: Periodically, HMFA is able to offer 5% mortgages for special purposes. The "Too Good But It's True Program" for example, offered to such mortgages to homebuyers purchasing in designated neighborhoods of selected cities. The utility RNC programs might ask HMFA to offer such an incentive for low income affordable ENERGY STAR housing in

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other areas. The lower interest rate would more than cover the cost of ENERGY STAR improvements.

7) *Home Plus Program*: Under this program, the homebuyer can include up to $15,000 in home repairs and improvements in the first mortgage on the home. Under existing program guidelines, utility RNC programs could encourage qualified buyers of existing homes to made energy efficiency upgrades at the time of purchase.

8) *UHORP Program*: This program furnishes financing and subsidies for the construction of new, affordable housing. Developers compete for UHORP funding. The utility RNC programs could encourage HMFA to require ENERGY STAR as the minimum energy efficiency standard for development applications.

We are aware that some initiatives have already been proposed and are being implemented under the existing utility RNC programs. We would recommend that these efforts continue.

2. Multifamily Programs

HMFA offers both construction financing and permanent financing for low- and moderate-income multifamily rental housing. HMFA also administers the federal low-income housing tax credit program. Since developers compete for financing in both programs, development applications usually pay attention to energy efficiency so that they can minimize living costs for low-income households. However, it may be appropriate for the utility RNC program to work with HMFA to encourage them to use ENERGY STAR as the standard for all applications.

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V. Council on Affordable Housing

The Council on Affordable Housing (COAH) is an administrative agency that oversees the implementation of the Fair Housing Act of 1985. While a significant amount of affordable housing is constructed as a result of the Act, COAH does not directly set policy on affordable housing.

A. COAH's Mandate

COAH was created by the Fair Housing Act of 1985 as the State Legislature's response to a series of New Jersey Supreme Court cases known as the Mount Laurel decisions. The Supreme Court established a constitutional obligation for each of the 566 municipalities in the state to establish a realistic opportunity for the provision of fair share low and moderate income housing obligations, generally through land use and zoning powers. The legislature provided an administrative alternative to this constitutional obligation via the Fair Housing Act.

With 11 members appointed by the Governor on the advice and consent of the Senate, COAH is empowered to: (1) define housing regions, (2) estimate low and moderate income housing needs, (3) set criteria and guidelines for municipalities to determine and address their own fair share numbers and then (4) review and approve housing elements/fair share plans and regional contribution agreements (RCAs) for municipalities. As a quasi-judicial organization, COAH can also impose resource restraints and consider motions regarding housing plans.

In December 1990 the New Jersey Supreme Court directed COAH to determine criteria for development fee ordinances and then to review and approve the ordinances for municipalities.

COAH is an administrative and regulatory organization. It does not produce, fund or compel municipalities to expend local funds to build affordable housing. Funding is usually provided by the DCA through its various housing programs or by the HMFA using its bonding capabilities or its federal low income housing tax credit allocations. Some municipalities also expend their own funds or utilize bonding resources.

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B. COAH's Certification Procedures

COAH does provide municipalities that choose to enter its process and obtain substantive certification of their fair share plans with an administrative shield from developer's lawsuits. Often such lawsuits result in the imposition of "builder's remedies" (four market units for each low and moderate income unit).

The COAH Process New Jersey municipalities enter the COAH process voluntarily. They do so by filing a housing element (required by the Municipal Land Use Law as part of each municipality's master plan) and a fair share plan establishing a realistic opportunity for the provision of a predetermined number of units affordable to low and moderate income households.

Within two years of such filing, municipalities must petition COAH for substantive certification (approval) of such plans if a municipality is to remain under COAH's jurisdiction. Petitioning assures continued protection from lawsuits while COAH reviews, sometimes requests revisions and possibly mediates objections from interested parties before COAH grants or denies substantive certification. Certification is granted for a six-year period and may be withdrawn if a municipality fails to assure the continuing realistic opportunity for its fair share housing obligation.

Often municipalities can meet a portion of their fair share obligation through rehabilitation of existing units. To provide a realistic opportunity for the construction of new units, municipalities may zone specific sites for residential developments by the private sector. Developers must agree to build a fixed percentage of affordable units---usually 20 percent---of the total constructed on the site, to market to low and moderate income households and to maintain affordability for 30 years.

Other methods for meeting the obligation include municipally sponsored construction using for-profit or nonprofit builders, the purchase of existing units for sale or rent to eligible householders, regional contribution agreements (RCAs), the creation of accessory apartments within existing structures, a write-down/buy-down program and the provision of alternative or congregate living arrangements including group homes for the physically handicapped or developmentally disabled.

Of the 566 municipalities in the state, approximately 260 are participating as of June 6, 2000. An additional 23 urban aid municipalities are providing affordable housing as receivers of RCA

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dollars. Another 40 municipalities are under the jurisdiction of the court.

Every county in the state has at least two municipalities involved in the COAH process or in a court-ordered effort. Bergen County has the highest number (38) followed by Morris County (34).

C. Affordable Housing Results

To date, according to COAH's monitoring reports, the opportunity for approximately 58,500 affordable units has been provided. This includes about 26,800 units that have been built or are under construction, 14,600 units that have realistic zoning in place, 6,700 RCA units and 10,400 units that have been rehabilitated. The statistics are based on monitoring information from municipalities under COAH's jurisdiction. There are hundreds more units that have been created and/or have zoning in place in municipalities that are under the court's jurisdiction and do not report to COAH.

The Fair Housing Act permits certified or court-ordered municipalities to transfer up to 50 percent of their fair share obligations to one or more municipalities within the applicable housing region. The sending municipality must transfer a negotiated payment now established at $20,000 per unit (which is expected to increase for new petitions after January 1, 2001) as the minimum. Funds may be used to subsidize new construction or to rehabilitate existing units for occupancy by low or moderate income households. More than $130 million has been approved for transfer to urban areas.

D. Recommendations

COAH establishes each municipality's fair share of affordable housing, certifies municipal fair share plans, and administers regional contribution agreements. It focuses on number of affordable units, not types and has no authority to specify the type of affordable housing units constructed. As such, it does not appear that there is any opportunity for utility RNC programs to intervene in the new housing market through COAH.

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VI. Other Affordable Housing Market Actors

A number of other organizations play important roles in the affordable housing market. These include nonprofit housing developers, other nonprofit organizations, and banks and other investors. In general, government agencies control the funding for and establish the policies for affordable housing. Therefore the primary focus for the utility RNC programs should be on those agencies. However, it is important for the utility RNC programs to be aware of the roles played by other affordable housing market actors.

A. Nonprofit Housing Developers

The primary role of nonprofit housing developers is to design, construct, and, in some cases, manage affordable housing projects. The developers usually put together a number of financing sources for a project and often must submit a competitive application to DCA or HMFA to obtain funding and/or financing for a project.

The missions of these developers are diverse. Some restrict their activities to a single neighborhood, while others operate throughout the state. Some focus on housing, while others are broad-based social service agencies. Some build housing for a specific target group (e.g., disabled adults), while others build housing that it available to a broader range of households.

The Affordable Housing Network of New Jersey lists over 100 nonprofit housing and community development corporation members on its web site.

B. Other Nonprofit Organizations

In the process of collecting information about affordable housing programs, we identified a number of other nonprofit organizations that work in the affordable housing area. They include:

- *New Jersey Citizen Action*: This organization advocates for a number of low income causes, including affordable housing.
- *New Jersey Affordable Housing Network*: The primary mission of this organization is to advocate for affordable housing.

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- *Garden State Affordable Housing*: This organization acts as an intermediary between nonprofit affordable housing developers and investors.

C. Banks and Other Investors

A number of different types of investors participate in the federal low-income housing tax credit program that is administered by HMFA's multifamily housing program office. In New Jersey's program, an affordable housing developer gets "tax credit points" approved by HMFA. Garden State Affordable Housing acts as a "Tax Credit Equity Syndicator" and serves as an intermediary between the developer and the investor.

Many banks invest in low-income housing to fulfill requirements under the Community Reinvestment Act, 1977. The Act encourages depository institutions to help meet the credit needs of the communities in which they operate. For example, as part of its agreement with state banking officials to acquire Summit Bank, Fleet Bank agreed to a number of CRA expenditures, including investments in low-income multifamily housing and a commitment to furnish mortgage loans to low- and moderate-income households.

D. Recommendations

In general, government agencies control the funding for and establish the policies for affordable housing. Therefore the primary focus for the utility RNC programs should be on those agencies. However, it is important for the utility RNC programs to be aware of the roles played by other affordable housing market actors.

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Appendix

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Residential New Construction Attitude and Awareness Baseline Study

Lender Survey

Report on Findings

Prepared for the New Jersey Residential New Construction Working Group

January 2001

NQTQ03

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Executive Summary

This Report presents the findings from the Lender Survey for the New Jersey Residential New Construction Awareness and Attitudinal Baseline Study (RNC study). A summary report consolidates information from this and other research conducted for the Baseline Study.

A. Background

The New Jersey Residential New Construction Working Group (Working Group), which consists of PSE&G, GPU Energy, Conectiv Power Delivery, Elizabethtown Gas Company, South Jersey Gas, Rockland Electric Company, and New Jersey Natural Gas Company, is charged with developing and implementing a coordinated, statewide utility residential new construction program that will increase the energy efficiency of new homes constructed in New Jersey. In support of that effort, the Working Group has commissioned a comprehensive study of New Jersey's residential new construction market with the following goals.

- *Baseline Measurement*: The primary objective of the study is to establish a baseline that documents the current market for ENERGY STAR homes.

- *Program Design and Implementation*: The secondary objective of the study is to enhance the Working Group's understanding of the residential new construction market.

- *Customer Sited Clean Generation*: In addition, this study will support the work of the Customer Sited Clean Generation Working Group (CSCG Working Group).

The Working Group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study. The purpose of this study is to obtain information on the current and potential roles of lenders in encouraging the construction of energy efficient homes. In phase one, we collected background information on lending institutions in New Jersey. In phase two, we conducted 15 interviews with lending officers responsible for the development of new mortgage products for the residential new construction market in New Jersey.

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B. Background on the Lending Market in New Jersey

We collected background information on New Jersey mortgage lenders, energy efficiency lending products, and secondary mortgage market actors. This information helped us to develop the sample frame and the data collection instruments for the Lender Survey. However, the information we collected may also prove useful to the Working Group.

1. Energy Efficiency Lending Products

Energy Efficiency Mortgages (EEMs) are a residential lending product that allows homebuyers to include the cost of energy efficiency improvements in the purchase value of a new or existing housing unit and to qualify for a mortgage that is 30% of gross income (instead of the market standard of 28%). These products are currently offered by a number of lending institutions within and outside New Jersey. They can be used with any home purchase.

ENERGY STAR is a program sponsored by the U.S. Environmental Protection Agency (EPA). To offer ENERGY STAR loans, a lender must sign a Partnership Agreement with the EPA and complete a Commitment Form. ENERGY STAR lenders must offer homebuyers financial incentives, such as lower application fees, closing costs, or interest rates. ENERGY STAR loans can only be used on ENERGY STAR certified homes.

2. Secondary Market Actors

FHA furnishes a mortgage insurance program that helps to improve lending terms for low and moderate income households. In 1999, FHA loans were about 20% of the New Jersey market. FHA insures EEMs. Conventional mortgages are insured by other commercial organizations. It is not clear if any of these organizations insure EEMs.

Fannie Mae, Freddie Mac, and Ginnie Mae purchase and securitize mortgages and thereby infuse capital into the mortgage industry. All three mortgage purchasers will purchase EEMs and ENERGY STAR mortgages.

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3. New Jersey Lending Institutions

Over one hundred institutions are active in the New Jersey mortgage market. However, in 1999 the top five lenders issued 26% of the residential mortgages in the state and the top 75 lenders issued over 80% of the mortgages. The Appendix to this report includes the list of the top 75 lenders.

C. Awareness of Programs

The primary goal of the Lender Survey is to establish a baseline against which market changes resulting from the utilities' residential new construction program can be measured. To meet this goal, the survey collected information on awareness of the ENERGY STAR Homes program and the existing utility residential new construction programs. The awareness and attitude findings include the following.

- *Awareness of Existing Programs*: About half of the lenders have heard of the EPA ENERGY STAR program. About one-fifth of the lenders are aware of each existing utility program and about two thirds of the lenders have heard of at least one program. Those lenders who have not heard of the EPA ENERGY STAR program are unlikely to have any awareness of any of the utility programs.

- *Awareness of Program Requirements and Benefits*: Only a limited number of lenders characterize RNC program homes as energy efficient homes that have lower energy bills. Very few are aware of the existing utility programs' home rating requirements or think of the homes as offering homeowners any benefits, other than lower utility bills.

There is a moderate, but apparently superficial level of awareness of the existing utility residential new construction programs. Lenders do not appear to be very knowledgeable about energy efficiency.

D. Mortgage Product Development

We asked lenders if their institution offered preferential mortgage products and, if so, what the process is through which these products are developed and marketed to homebuyers. Most lenders that we interviewed said that their institutions offer at least one type of preferential mortgage product. The products most commonly mentioned were mortgages for low income families and for affinity

groups. Lenders said that they offer these programs either because they are required by law, or as a way to improve their position in the market. Most lenders said that the process by which preferential mortgage products are developed is lengthy and complicated.

E. ENERGY STAR Mortgage Product Potential

In this section, we focused on issues that pertain to the development of an ENERGY STAR mortgage product. Most lending officers reported that the development of an ENERGY STAR mortgage product would follow a similar process as the development of any other mortgage product. Lenders said that they would consider offering an ENERGY STAR mortgage product if they were convinced that the program had financial value to them. Lenders believe that the concept of ENERGY STAR should be first marketed to builders and homebuyers and only later to lending institutions. Lenders respond to changes in demand, so if they see a significant increase in demand for the product, they will consider developing an ENERGY STAR mortgage.

F. Market Acceptance of ENERGY STAR Mortgages

Most lenders are confident that an ENERGY STAR mortgage product will enjoy high levels of acceptability among homebuyers once a number of important barriers are overcome. Lenders believe that there is no reason why homebuyers should have a negative predisposition toward this type of mortgage product. However, homebuyer education on the existence of the ENERGY STAR program, energy efficiency and ultimately on ENERGY STAR mortgages must come before any lender activity.

G. Attitudes of ENERGY STAR Lenders

Four of our interviews were conducted with lenders who are involved with the ENERGY STAR program. Two of the lenders have signed an ENERGY STAR Partnership Agreement. However, one of those lenders was unaware of the Agreement and the other reported that his institution has had inadequate support has not issued any ENERGY STAR mortgages. The other two lenders are in the process of developing ENERGY STAR mortgage packages and appear quite enthusiastic.

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H. Recommendations for RNC Programs

The Lender Survey demonstrated that there is some interest on the part of lenders in supporting the RNC programs. However, specific marketing efforts appear to be required to recognize the market potential.

1. Secondary Mortgage Market Actors

Our research demonstrated that the secondary mortgage market is generally supportive of EEMs and ENERGY STAR loans. The Working Group may wish to obtain a formal statement of policies from each of those market actors for use in marketing energy efficiency lending products.

2. EEM and ENERGY STAR Mortgage Marketing

If the new RNC program is to effectively market energy efficiency mortgage products in New Jersey, there needs to be a change in the marketing procedures. First, lenders need to be informed of the support available from secondary market actors. Second, lenders need to be convinced that the RNC program will bring concrete financial benefits to them. Third, there need to be ongoing contacts with participating lenders to ensure that issues are resolved in a timely way. Third, lenders need better linkages to other ENERGY STAR market actors.

3. Community Reinvestment Act Funds

Many of the lenders that we interviewed told us that their preferential mortgage products are developed in response to requirements under the Community Reinvestment Act. Most of these institutions have existing plans for how those funds are to be distributed. However, there may be some opportunity to develop more attractive energy efficiency loan packages through use of CRA funds.

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I. Introduction

The purpose of this report is to furnish information on the findings from the Lender Survey for the New Jersey Residential New Construction Awareness and Attitudinal Baseline Study (RNC study). This report furnishes background information on the lending industry in New Jersey, an overview of survey procedures, and an analysis of the findings from the Survey. A separate report presents detailed information on the survey methodology. A summary report consolidates the information from the series of research tasks conducted for the RNC Study.

A. Background

The New Jersey Residential New Construction Working Group (Working Group), which consists of PSE&G, GPU Energy, Conectiv Power Delivery, Elizabethtown Gas Company, South Jersey Gas, Rockland Electric Company, and New Jersey Natural Gas Company, is charged with developing and implementing a coordinated, statewide utility residential new construction program that will increase the energy efficiency of new homes constructed in New Jersey. In support of that effort, the Working Group has commissioned a comprehensive study of New Jersey's residential new construction market with the following goals.

- *Baseline Measurement:* The primary objective of the study is to establish a baseline that documents the current market for ENERGY STAR homes against which market changes can be measured.

- *Program Design and Implementation:* The secondary objective of the study is to enhance the Working Group's understanding of the residential new construction market and to identify the opportunities and barriers associated with market transformation efforts.

- *Customer Sited Clean Generation:* In addition, this study will support the work of the Customer Sited Clean Generation. (CSCG Working Group) in its efforts to understand the market for CSCG technologies.

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The Working Group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study. The study consists of 13 research components:

- Nonparticipating Homebuyer Study
- Participating Homebuyer Study
- Nonparticipating Homebuilder Study
- Participating Homebuilder Study
- Lender Study
- Residential Real Estate Appraiser Study
- Residential Real Estate Agent Study
- Building Inspector Study
- Trade Ally Study
- CSCG Analysis
- Residential New Construction Statistics
- Affordable Housing Organizations
- CSCG Industry Statistics

The 13 research tasks were conducted independently, since each required research and interviews with different market actors. However, all of the studies used common language and definitions so that the results are comparable across market sectors.

B. Study Goals and Objectives

The purpose of this study is to obtain information on the current and potential roles of lenders in encouraging the construction of energy efficient homes. The study achieves this goal in three ways.

- *Background Information*: The project team collected background information on lenders who provide mortgage financing in New Jersey, how they are ranked and the types of products they provide. In addition, the project team studied the

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structure of the primary and secondary mortgage markets, as well as Energy Efficient Mortgages (EEMs) and ENERGY STAR Mortgages.

- *Baseline Attitudes and Awareness*: To measure baseline awareness of and attitudes toward the ENERGY STAR Homes program and the existing utility-sponsored residential new construction programs, the survey asked lenders to discuss their awareness of and experiences with these programs. Lenders were also asked about their views of the market potential of an ENERGY STAR mortgage product, the barriers that such a product may face in the marketplace, and the best ways to promote it to homebuyers and other market actors.

- *Understanding the Mortgage Product Development Process*: The survey developed additional information on the residential new construction market to assist the utilities in their market transformation efforts. The survey asked lenders to furnish insights into mortgage product development procedures, preferential mortgage products, and the most effective ways for utilities to promote energy efficient new homes to homebuyers.

The study also supported the work of the CSCG Working Group. The survey asked lenders questions regarding their awareness of and attitudes toward CSCG technologies.

C. Target Population

Lending institutions play a significant role in the residential new construction market because they provide mortgage financing to builders and individual homebuyers. They can facilitate the development of energy efficient housing by including Energy Efficient Mortgages (EEMs) and ENERGY STAR mortgages in their product line.

In this market sector, a small number of lenders comprise a very large share of the market. The top 25 lenders issued 60% of all mortgages. In addition, the information that we seek from industry informants (i.e., a strategy for getting lenders to offer new mortgage products) requires in-depth discussions with senior lending officers. Therefore, we designed a study that involved a small number of in-depth interviews with lending offices.

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D. Study Methodology

The study consisted of 15 telephone interviews with senior new product development officers from the mortgage department of lending institutions that do business in New Jersey. The interviewed lenders comprised about 22% of the New Jersey mortgages in 1999. The *Lender Survey Methodology Report* furnishes detailed information on the survey. The following are the most important aspects of the design and implementation of the survey.

- *Sample Frame*: Respondents were selected based on the volume of residential mortgages that they originated in New Jersey in 1999 and on their share of the New Jersey residential mortgage market. We identified the top 75 lenders in terms of mortgage volume and we divided them two groups; the top 25 lenders were one group and the next 50 lenders were the second group. We complete eight interviews in the first group and seven interviews in the second group.

- *Respondent Contact*: We attempted contacts with all of the lenders for whom we could obtain a contact name and address. Forty-three advance letters were sent to senior new mortgage product development officers describing the purpose of the survey. We then contacted the officers and tried to schedule an appointment for an in-depth interview. We called at the appointed date and time and conducted the interview.

- *Interview*: The interview was administered over the telephone by a Roper Starch Worldwide Research Manager. The interviewer requested permission from the respondent to tape the interview. The taped interviews along with interviewer notes were used to write summary reports for each participating lending officer. The summary reports provided an in-depth understanding of each lender's perceptions and attitudes.

- *Incentive*: Each respondent was sent a $100 check for his/her participation in the interview. We offered respondents the option of having the check written out to them or to a charity of their choice.

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II. Background on the Lending Market in New Jersey

In this Section, we furnish background information on the lending market. We discuss Energy Efficiency Mortgages (EEMs) and the ENERGY STAR Mortgage Program, identify the major secondary lending market actors, and furnish statistics on the major lenders in New Jersey. This information provides a context for the findings from the Lender Survey.

A. Lending Programs

Lending programs that support residential energy efficiency take two forms. First, there is a generic class of lending products called Energy Efficient Mortgages. Though the specifics of these products can vary among institutions, these mortgage products offer special treatment for the costs of energy efficiency improvements to new or existing homes. In addition, there is a specific program sponsored by the Environmental Protection Agency (EPA) named the ENERGY STAR Mortgage Program. To offer ENERGY STAR loans, a lender must sign a Partnership Agreement with the EPA and complete a Commitment Form.

Energy Efficient Mortgages usually include two important features: they allow a homebuyer to add the cost of energy efficiency improvements into the mortgage and they allow the homebuyer to have a higher mortgage to income ratio.

- *Home Value*: The lender automatically adds (subject to certain limitations) the cost of efficiency improvements to the value of the home for computation of the assessed value of the home. This is particularly important for existing homes, since it allows the buyer of an existing home to borrow to pay for efficiency improvements as part of the mortgage, rather than through higher interest rate personal or home equity loans.

- *Stretch*: Since the lender knows that the homebuyer will have lower monthly utility bills, the mortgage to income ratio can be raised from 28% to 30%. This allows the homebuyer to get the larger mortgage that might be required to pay for the energy efficiency improvements.

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These features can be used for either new or existing homes. There is no requirement that the home be an ENERGY STAR home to use an EEM.

ENERGY STAR Mortgages are offered only by ENERGY STAR lenders for the purchase of ENERGY STAR homes. In order to be able to use the ENERGY STAR label, the lender must offer buyers of ENERGY STAR homes some financial incentive. The lender designs the specific financial incentive. Examples of some incentives currently offered are a $200 reduction in the application fee, $500 off closing costs, and a _% interest rate discount.

According to the EPA web site, 32 lending institutions offer ENERGY STAR mortgages. We attempted to make direct contacts with these 32 institutions, and were only able to find the ENERGY STAR loan officer for 12 lenders. Some lenders were no longer offering the program, while others could not be reached from the information on the EPA web site. According to the web site, only two ENERGY STAR lenders issue ENERGY STAR mortgages in New Jersey. Active marketing of the existing programs has led to interest by a number of other New Jersey lenders.

B. Secondary Lending Market Actors

Two types of secondary market actors affect the types of mortgage products offered by banks. FHA furnishes a mortgage insurance program that helps to improve lending terms for low and moderate income households. Fannie Mae and Freddie Mac purchase mortgages, package them into securities, and sell the securities on the global capital markets.

FHA supports the development of EEM products by having a mortgage insurance program that explicitly sets guidelines for an EEM. In New Jersey, FHA loans are about 20% of the loan market and are used mainly by low and moderate income households. Higher income households may obtain mortgage insurance from other sources. It is not clear that those mortgage insurers offer EEMs as a lending option.

Fannie Mae and Freddie Mac support the development of EEM products. Fannie Mae and Freddie Mac will buy EEMs from lending institutions. Therefore, any lender who wishes to develop an EEM product will find that they can sell those mortgages.

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C. New Jersey Lending Institutions

Over one hundred lending institutions are active in the New Jersey mortgage market. However, in 1999, the top five lenders issued 26% of the residential mortgages in the state. The top 25 lenders issued about 60% of the residential mortgages. According to data provided by CBMI, the total amount of residential mortgages issued by the top 75 lenders in New Jersey was $17.2 billion. The average value of mortgages was about $177,000.

Table 1.1: Top Ten Residential Mortgage Lenders in New Jersey

Lender Name	E-Star	1999 Mortgages	Market Share
Norwest Mortgage Inc Des Moines IA	Yes	9,422	7.69%
Cendant Mortgage Mt. Laurel, NJ	No	9,499	7.03%
Hudson City Savings Bank Paramus, NJ	Yes	3,654	3.94%
Countrywide Home Loans Calabasas, CA	Yes	5,783	3.69%
National City Mortgage Miamisburg, OH	No	5,762	3.66%
Mortgage Access Corp Morris Plains, NJ	No	4,439	3.11%
Summit Bank Bordentown, NJ	No	3,388	2.96%
Chase Manhattan Mortgage Edison, NJ	Yes	3,447	2.7%
Bank of America Dallas, TX	No	3,462	2.68%
First Union Mortgage Corp Charlotte, NC	No	3,843	2.55%

Table 1.1 provides detailed information on the top ten residential mortgage lenders in New Jersey in 1999. The addresses listed in the table represent the address from which information is reported to CBMI. It is useful to note that only half of the top ten lenders report New Jersey statistics from a New Jersey office. Moreover, most of the lenders on this list do business in other states.

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III. Baseline Awareness of Programs

The primary goal of the Lender Survey is to establish a baseline against which market changes resulting from the utilities' residential new construction programs can be measured. To meet this goal, the survey collected information on awareness of and attitudes toward the ENERGY STAR Homes program and the existing utility residential new construction programs. In this section, we identify the key awareness indicators, and furnish baseline statistics on their current levels.

Three New Jersey electric utilities have had residential new construction programs; GPU Energy's Good Cents program, Conectiv Power Delivery's ENERGY STAR Homes program, and PSE&G's EEH Five Star Program. Each program had different goals, objectives, and procedures. As a result of restructuring legislation, all of New Jersey's electric and gas utilities are participating in a coordinated, statewide residential new construction program. The new program will have a common set of goals, objectives, and procedures. In the baseline survey, we look at awareness of the existing utility programs. In any follow-up research, one would study the change in awareness and attitudes resulting from the implementation of the statewide program.

In the survey, we assessed awareness separately for each of the three existing utility programs and for the national ENERGY STAR Homes program. We assessed awareness at three levels.

- *Awareness of Program*: the lenders' awareness of the named program.
- *Awareness of Program Requirements*: knowledge of how a home qualifies for the named program.
- *Awareness of Program Benefits*: the knowledge of benefits that the named program delivers to homeowners.

These indicators give us a cursory understanding of lenders' awareness of the programs and their depth of knowledge about these programs.

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A. Awareness of Programs

The baseline awareness indicators show that many lenders have heard of the ENERGY STAR program but fewer are aware of the existing utility residential new construction energy efficiency programs. Very few lenders have a good understanding of the existing programs' requirements or the benefits that they offer to homebuyers.

Table 2.1 summarizes lender awareness of the national ENERGY STAR program and of the three existing utility residential new construction programs. About half of the lenders reported being aware of the ENERGY STAR program. Each of the existing utility programs was known to about one-fifth of lenders. Lenders who had never heard of the ENERGY STAR program were not aware of the utility sponsored programs either.

Table 2.1: Program Awareness

	Program Sponsor				
Response	Conectiv	GPU	PSE&G	EPA	Any Program
Aware	3	4	3	8	8
Not aware	12	11	12	7	7

B. Awareness of Program Requirements

Although name recognition of the ENERGY STAR label was high among lenders, very few of them seemed to have anything more than a superficial awareness of the requirements of the ENERGY STAR program and even fewer reported awareness of the existing utility sponsored program requirements.

Very few respondents indicated that an ENERGY STAR home is certified as energy efficient by a utility or a third party. Among the few who did, one lending officer offered the following explanation.

To qualify for the program, [a home must come with] a document prepared by the builder demonstrating the efficiency of the home. [The document] includes information regarding walls, ceilings, storm windows, heating

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Another respondent who rated himself as very knowledgeable about ENERGY STAR had a similar description.

You have a home that is certified to be more energy efficient than a typical home

C. Awareness of Program Benefits

A number of lenders were aware that an important benefit of an energy efficient home is lower utility bills. Some lenders also said that an ENERGY STAR home conserves energy or is energy efficient. One participant stated:

[an ENERGY STAR home] is cheaper to operate than a home without the ENERGY STAR label

Some also noted that a homebuyer who can demonstrate that his/her utility bills are lower may get the benefit of a larger mortgage, or a "stretch". Only one lending officer mentioned any of the non-financial benefits of an energy efficient home such as higher level of comfort, and environmental benefits. No lending officer mentioned indoor air quality or improved workmanship as other possible benefits of an ENERGY STAR home.

D. Program Awareness Among ENERGY STAR Lenders

Four of the fifteen lending institutions in our sample are involved with ENERGY STAR. Two lenders are listed as partners on the EPA web site and currently offer ENERGY STAR mortgages[1]. However, the officer at one of these lending institutions was surprised to find out that his institution was a partner to the program. He said that his awareness of the program is limited and he seemed to have minimal understanding of the program requirements. We later found out that the ENERGY STAR loan program at that institution was limited to a single loan officer who took financial responsibility for the ENERGY STAR incentive. The officer at the other listed lending institution said that his bank had not made any ENERGY STAR loans.

Two other lenders were in the process of designing ENERGY STAR loan programs and seemed very enthusiastic about the concept of

[1] A fifth lender mentioned that he offers energy efficient mortgages as required by FHA guidelines. However, the officer stated that these mortgages are not currently offered in New Jersey.

energy efficiency and of the benefits it can provide to homebuyers. In rating PSE&G's EEH 5 Star program, one of these lenders offered the following opinion.

> *5 Star is a good concept [and] it has a number of advantages. The homeowner gets the advantage of an efficient design and economic advantages- monthly utility bills are reduced. The advantage to developers is an economic advantage. They get some rebate from the utility*

The other officer from an institution that was developing an ENERGY STAR loan program mentioned that he was so impressed with the program that he would consider buying an ENERGY STAR house himself.

E. Sources of Information About the Programs

Lenders received information about ENERGY STAR from a variety of sources. A number of lending officers said that they found out about the existing utility programs from utility marketing materials, or presentations, or even utility bills. Two officers mentioned Macgrann Associates as their source of information on energy efficiency programs, while another two said that they found out about the programs through their work with Fannie Mae or HUD.

Other sources of information that lenders mentioned include TV and print advertisement, convention presentations, and work with out-of-state builders who build energy efficient homes.

In summary, most lenders are aware of the ENERGY STAR name, but few have any in-depth knowledge of what the name means or of the benefits associated with it. Few lenders are aware of the existing utility sponsored programs. Furthermore, very few lenders know that a participating home has to be rated or certified. The main source of information for lenders are utility companies, Macgrann Associates, and Fannie Mae or HUD programs that promote the concept.

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IV. Mortgage Product Development

We asked lenders to describe the process through which a new mortgage product is developed. We also asked if their institution offers preferential mortgage products, defined as loans with special terms offered only to specific groups. The purpose of these questions was to understand how new mortgage products are developed and thus identify the individuals and departments that utilities would need to approach with the concept of an ENERGY STAR mortgage.

A. Preferential Mortgage Products

All but one of the fifteen lenders than we interviewed, offer at least one preferential mortgage product. Most lenders indicated that they offer mortgages with special terms to low income families as part of their Community Reinvestment Act obligations[2]. About a third of the lenders said that they have programs for first-time homebuyers, and about one-fifth indicated that they have special mortgages for affinity groups, such as employees of companies that do business with the lending institution, trade unions, professional organizations, etc. Two lenders mentioned that they have "good credit" programs which reward mortgage applicants who have good credit with either a higher debt to income ratio, or with lower application fees. Three institutions offer an ENERGY STAR mortgage that offers a higher debt to income ratio. About one third of lenders also mentioned other smaller programs that offer lower application fees, stretch mortgages or other small incentives.

When asked about the reasons why their institution offers preferential mortgages, lending officers offered three types of justifications: 1) regulatory requirements; 2) competition; 3) social concerns. For example, most lenders said that they offer mortgages to low income

[2] The Community Reinvestment Act is intended to encourage banking institutions to help meet the credit needs of the communities in which they operate, including low- and moderate-income neighborhoods, consistent with safe and sound banking operations. It was enacted by the Congress in 1977 (12 U.S.C. 2901) and is implemented by Regulations 12 CFR parts 25, 228, 345, and 563e. The Regulation was revised in May 1995 The CRA requires that each insured depository institution's record in helping meet the credit needs of its entire community be evaluated periodically. That record is taken into account in considering an institution's application for deposit facilities, including merges and acquisitions.

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families to fulfill federal requirements but also "to meet community needs" and "to be good citizens". A number of officers indicated that they use these products to build relationships with current clients and to increase their share of the market. One lender explained how the company views itself.

We like to see ourselves as the high volume dealer with very low mark ups. . . [We] seek to lure competitors' customers by bringing something special to our product line. We want to cater to all consumers of mortgage products"

Another lending officer offered a slightly different view.

[We offer preferential mortgage products] because we are filling a void in the marketplace

B. Mortgage Product Development Process

Many lenders reported that the process of new mortgage product development is lengthy and includes several steps. Some lenders mentioned that they may be approached by Fannie Mae or Freddie Mac with a new concept for a product. According to one officer who provided us with a very detailed account of the procedures followed by her institution, the process is long and complicated.

[The process begins with] a competitive assessment. We view what our competitors are offering, analyze our clients' needs, and, if a market opportunity exists, we put together a business case. . . Once the business case is put together, it is submitted to senior management for review. Financial impact studies are conducted, including cost/benefit analysis and gain on sale/profitability analysis. Another consideration when developing a new mortgage product is how the new product will affect products [already in the market]. The final stage of new product development is a corporate review, including a legal analysis conducted by counsel in all fifty states

Another officer mentioned that, once the product is ready to go on the market, the company trains its lending officers on the specifics of the program. Then program success is monitored and evaluations and adjustments are made. Yet another lender said that his institution was particularly concerned about regulatory oversight since a new

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mortgage product has to be reviewed by federal auditors, secondary market auditors and internal auditors.

The one lender that does not offer preferential mortgage products discussed the product development of general mortgages. According to this lending officer, since his institution sells 100% of their loans to investors, the focus is on developing a product in line with the guidelines set by the investors who buy the loans.

> *We have to research what our investors' guidelines are as far as loan to value, types of borrower, etc. We have to work within the guidelines. . . to make sure that the loan . . . is sellable*

In summary, most lenders offer at least one preferential mortgage product. Lending institutions offer these products either because it is a regulatory requirement or because they are looking to increase their share of the market by catering to the needs of specific groups. Lenders report that the process of new product development is lengthy and cumbersome, involving several steps.

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V. ENERGY STAR Mortgage Product Potential

This section addresses issues that deal with the development of an ENERGY STAR mortgage product. First, we asked lenders to describe the process through which an ENERGY STAR mortgage product would be developed. Then we asked lending officers to discuss the reasons why a lender may choose to develop an ENERGY STAR mortgage product and the ways that lenders would use to market an ENERGY STAR mortgage.

A. ENERGY STAR Mortgage Product Development

We asked lending officers to discuss the process through which their institution would develop an ENERGY STAR mortgage product. The purpose of this question was to assess whether lenders believe that such a product would need a special product development process, or whether it would follow the regular development process that lending institutions use for all of their products.

A number of lending officers mentioned that no special product development process would be necessary for the establishment of an ENERGY STAR mortgage product. An ENERGY STAR mortgage product would need to go through the regular product development channels, which include a planning stage, an evaluation stage and an implementation stage.

One lending officer strongly stated that large lending institutions would show interest in such a mortgage product only if they would be able to offer it in several markets. The officer suggested that New Jersey utilities contact utilities in other states and work with them to develop similar programs.

Another lending officer suggested that the first step to developing an ENERGY STAR mortgage product would be to get a major federal organization such as Fannie Mae involved so as to secure the success of this product in the secondary or investment markets. This view was echoed by another respondent.

Within my institution, I wouldn't develop this product from scratch. I wouldn't even be involved if I couldn't sell them in a secondary market

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We also asked lending officers to discuss the special features or terms that an ENERGY STAR mortgage product may offer to homebuyers. Most lenders said that homebuyers would be lured by lower interest rates and lower closing costs. However, most lending institutions would be unlikely to consider a discount rate because it would cut into their profits. Only if utilities can subsidize the rate reduction, would lenders consider offering a lower rate for ENERGY STAR homes.

A number of lenders suggested that they could offer a higher debt to income ratio as a special feature of an ENERGY STAR mortgage. However, one lender argued that a stretch may not be seen as a very attractive offer since many institutions already offer debt to income ratios that can reach 50% of a person's gross income.

B. Reasons to Offer ENERGY STAR Mortgages

Lenders were asked to identify reasons why an ENERGY STAR mortgage product would be an attractive concept to lending institutions and to homebuyers.

The vast majority of lending officers focused on "dollars and cents" reasons, arguing that lenders would agree to market such a mortgage product if they are convinced that ENERGY STAR mortgages would bring in more business for them, or allow them to tap into a new part of the market.

I would offer reduced fees [for ENERGY STAR mortgages] to get my foot in the door. . . [It] could open an opportunity to do more business with the buyers

Some lending officers argued that offering an ENERGY STAR mortgage product could have potential public relations value for the lender and help them in their relationship with their local communities.

It's a good community awareness thing to do, PR-wise

A small number of lending officers also mentioned that offering an ENERGY STAR mortgage would be good for environmental reasons.

Environmentally, it would help reduce out reliance on foreign energy sources

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However, it is not clear if this line of argument is meant to be used as a marketing message to homebuyers, or if it can also be used internally, to convince the higher echelons of the institutions about the viability and desirability of an ENERGY STAR mortgage product.

C. Marketing of ENERGY STAR Mortgages

There is significant agreement among lending officers that an ENERGY STAR mortgage concept should first be marketed to builders, real estate agents and homebuyers, not lenders. Lenders will be convinced to offer this product only if they see significant demand for it in the market.

The utility has to go to the builder, then the builder to the lender. It has to be driven that way, not by PSE&G coming to us like it happened a few years ago. They tried to market to us, but they couldn't say they had a builder working on "x" number of homes

Other lending officers suggested that federal organizations such as Fannie Mae and Freddie Mac should get involved. The top 25 lending institutions that control 50% of the market could be approached by Fannie Mae or Freddie Mac with the ENERGY STAR mortgage concept. According to at least one lender, it would be easier to sell the concept, if some of the big players are involved.

In discussing messages that could be used to promote ENERGY STAR mortgages to different market actors, most lenders focused on "dollars and cents" ideas. A number of lending officers suggested that an ENERGY STAR marketing campaign targeting lenders should focus on building relationships and increasing market share. Another concern was the level of security that these loans may involve and some lenders mentioned that a successful message should state that these loans are secured and thus create no risks for the lender.

This is an opportunity to make more loans and more profitable loans to an untapped market. . . [Focus on] that these are fully secured loans. . . These loans may be more profitable to the extent that the energy efficiency improvements will enhance the value of the property and make it more likely that the loan will be repaid

When marketing to homebuyers, most lenders said that utilities should focus on consumer energy savings, or affordability.

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In summary, most lending officers reported that the development of an ENERGY STAR mortgage product would follow a similar process as the development of any other mortgage product. Lenders said that they would consider offering an ENERGY STAR mortgage if they were convinced that the program had financial value to them. The "dollars and cents" reasons that many lending officers mentioned include increased market share, or access to a new and untapped market. Lenders believe that the concept of ENERGY STAR should be first marketed to builders and homebuyers and only later to lending institutions. Lenders respond to changes in demand, so if they see a significant increase in demand for the product, they will consider developing an ENERGY STAR mortgage. The participation of major federal organizations such as Fannie Mae or Freddie Mac in the program could also help convince lenders to develop an ENERGY STAR product.

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VI. Market Acceptance of ENERGY STAR Mortgages

In this section we focused on the market acceptability of ENERGY STAR mortgages and what lenders consider to be the barriers that the development of an ENERGY STAR mortgage product may face. We also asked lending officers to discuss their views on the potential incentives that utilities should offer to encourage the success of an ENERGY STAR mortgage program.

Most lenders are confident that an ENERGY STAR mortgage product will enjoy high levels of acceptability among homebuyers once a number of important barriers are overcome. Lenders believe that there is no reason why homebuyers should have a negative predisposition toward this type of mortgage product. However, homebuyer education on the existence of the ENERGY STAR program, energy efficiency and ultimately on ENERGY STAR mortgages must come before any lender activity. Lending officers believe that a series of demand-side issues must first be resolved, before lending institutions jump on the ENERGY STAR wagon.

A. Barriers to ENERGY STAR Mortgages

Lenders identified several types of barriers to the success of an ENERGY STAR mortgage product. Demand side barriers include low levels of awareness among different market actors, lack of training and lack of education. On the supply side, lenders argued that the success of an ENERGY STAR mortgage may be impeded by the low levels of energy efficient new construction in New Jersey, the high cost of energy efficiency improvements, and the possibility of paperwork delays and fraud. Lenders also said that their offering an ENERGY STAR mortgage would depend on the types of terms that utilities sought for this product.

Some lenders did not think that there is a strong basis for preferential treatment in designing energy efficiency mortgages. Lenders may be willing to offer lower application fees, or higher debt to income ratios, but it will be hard to convince them to offer lower interest rates or fewer points.

The case might be made that by having lower utility bills, a homebuyer will have more disposable income but that won't help much in terms of interest or points

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Another lending officer expressed a similar view.

Have to define what we're looking for- a lower rate or higher qualifying ratio; lower rates would be more difficult but getting more people to qualify wouldn't be as difficult

A number of lenders wondered whether the level of energy efficient new construction in New Jersey was high enough to make the development of an ENERGY STAR mortgage product worthwhile. One lending official said that her institution would be interested only if the product could be offered in several markets across the United States. Another stated his concern in the following way.

[A barrier to implementing an ENERGY STAR mortgage product would be] having homes available. No one has called me to say they have these homes available. . . Someone has to say how many energy efficient homes they've built to indicate that we've missed out on those loans because there's no program offered by us

Yet another lending officer argued that lending institutions make decisions about credit using an automated model that currently does not incorporate energy efficiency. Thus energy efficiency is not a factor in the lender's decision to extend credit to an individual. This lending officer felt that if energy efficiency needs to be added as a factor, the process will become more complicated.

A lot of lenders would view this as a step backward in processing the loan, a complication

B. Utility Incentives for ENERGY STAR Mortgages

Most lenders agree that incentives offered by utility companies would make ENERGY STAR mortgages more attractive to both lending institutions and to homebuyers. Lenders offered a number of different suggestions regarding the types of incentives that utility companies could offer to lending institutions. Some lenders said that if ENERGY STAR mortgages offer homebuyers a lower interest rate, then utilities should be responsible for making up the difference between the lender's regular rate and the discounted rate. This way, the mortgages will become more competitive and both homebuyers' and lenders' interest will increase. Similar suggestions were made regarding lower

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closing costs and other mortgage-related expenses that homebuyers incur.

If the mortgage reduces costs, the utility could pick up a piece of that. . . Could give grants to buyers or pick up a piece of the closing costs. Doing that in combination with the lender reducing fees or rate makes a good deal for buyers

Another lender mentioned that utilities could provide their own financing directed specifically to energy efficiency improvements.

In addition to bank loans, they could offer a portion of financing or a special financing for home energy improvements working in tandem with the bank. Maybe 80% of the financing would come from the bank and 20% from the utility company

Joint marketing incentives were also among the suggestions that lenders made. Lenders seemed to think that a joint marketing campaign with utilities could lead to more customers and thus a larger market share for their lending institution. An official from one of the ENERGY STAR lenders recommended that utility companies develop ENERGY STAR marketing materials that mention the participating lending institution as a partner.

If they could, in their marketing, mention our bank. Or, if I got in my statement from PSE&G a notice saying that they have partnered with "x" bank to help you finance your home. They need to help us get more customers

A similar approach was offered by another ENERGY STAR lender who emphasized that his institution does not expect financial incentives so much, as it hopes for greater accessibility to customers, and particularly builders. This officer also mentioned that even though his institution is an ENERGY STAR participant, he never received any marketing materials from the ENERGY STAR program and he does not have the necessary information to respond to inquiries from homebuyers or builders.

A different suggestion was made by one lender who thought that an appropriate incentive to lenders who offer ENERGY STAR mortgages may be a discount on lender utility bills. This lending officer suggested that utilities could offer monetary savings on the lender's utility bills to lenders who offer ENERGY STAR mortgages.

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In a limited number of cases, the question about incentives that utility companies could offer, seemed to confuse some lending officers who misunderstood the purpose of the question. Some lending officers seemed to interpret the word "incentives" as something akin to special perks or some form of bribery. One official said that rewards to bank employees for promoting one mortgage product over another are inappropriate. This view was echoed by another lending officer.

We would not accept anything from a utility because it would look like impropriety

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VII. ENERGY STAR Lenders' Attitudes

We interviewed four lenders who are ENERGY STAR partners and offer ENERGY STAR mortgages to New Jersey homebuyers. However, only three of the four lending officers were aware of their institution's affiliation with ENERGY STAR and could discuss their experience with the program.

ENERGY STAR lenders reported that the development of an ENERGY STAR mortgage product is not much more complicated than the development of any other preferential mortgage product. Two lenders said that they were initially approached by the utility companies regarding the ENERGY STAR mortgage concept. Both lenders are in the final stages of developing an ENERGY STAR mortgage.

In discussing the reasons why his institution decided to offer this product, one lending officer mentioned that the utility company informed him about the program and about the competitive advantage that his institution would get by offering an ENERGY STAR mortgage.

> *[They told me] there are some lenders out there offering preferential mortgage products [for energy efficient construction]. Since [name of institution] is a state-wide lender, it can handle all geographies of the state, yet still be able to provide certain benefits for ENERGY STAR mortgages*

The second ENERGY STAR lender was more focused on the benefits to the homebuyer and he reported that the reason why lenders should offer preferential mortgages for energy efficient homes is that these product is beneficial to the homeowner.

> *It gives us an opportunity to offer a product with an economic advantage to the buyer*

This lender focused more on the need to market the product to homebuyers. His view was that those homebuyers who are the target population for ENERGY STAR mortgages must be informed and educated about the benefits of the program.

> *You need to prepare people. It's not just educating the developers, but also the consumer. . . What got my attention in*

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> *looking at 5 Star was clearly understanding that the benefit falls into the homeowner's pocket. If a lending institution understands the importance of doing that, it improves the marketability*

The other ENERGY STAR lender also agreed on the importance of advertising to homebuyers and suggested the message focuses on the energy cost savings that an energy efficient home offers to the homebuyer.

When discussing barriers to offering ENERGY STAR mortgages, one lender focused on the lack of information and thus the lack of an adequate understanding that exists among lenders.

> *Not having an accurate understanding of the program [is a barrier]. I did not look at the stuff for years because my perception was that it cost me money and I didn't see an economic gain. . . Not understanding the advantages is a barrier.*

This lender argued that ENERGY STAR may face similar barriers not only among lenders, but also among consumers and builders who may shun the program out of fear of accruing additional costs.

The one lender whose institution has already implemented the ENERGY STAR program, reported that he was contacted by the EPA and Macgrann Associates. This lending officer reported that he was very interested in the initial concept as it was outlined to him by Macgrann Associates. Macgrann Associates informed him about the activities of other lending institutions in this field and pitched the ENERGY STAR mortgage program as a way to improve his institution's competitive advantage relative to other lenders.

This officer felt that the message and its delivery were both very effective. He decided that ENERGY STAR could work a vehicle for his institution to access more effectively the new construction market. However, he was not satisfied with the program implementation process and felt that the EPA and Macgrann Associates were slow in providing him and his institution with information and assistance. His institution never received any marketing materials from either the EPA, or PSE&G.

This lending officer had expected that the program sponsors would provide him with a list of ENERGY STAR builders in New Jersey so that he could contact the builders directly and market his institution's ENERGY STAR mortgage program to them. The officer also mentioned

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that in the past two years, there has been very little interest in this program from borrowers. Thus, he felt that taking the program directly to builders would help make it more successful.

This officer also reported that he took his request for a comprehensive list of construction companies that build energy efficient housing in New Jersey, to PSE&G. The utility officials gave him a link to a website and a password to access it, but the password never worked.

As far as utility incentives are concerned, this officer stated that his institution was never offered any incentives to encourage them to offer ENERGY STAR. The officer reported that incentives would be useful as a means to promote the program, but insisted that the most useful incentive would be access to customers, especially builders.

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VIII. Recommendations to RNC Working Group

The lender survey demonstrated that there is some awareness, but limited understanding of the ENERGY STAR program among lenders. In addition, it showed that the lenders have very little awareness of the existing utility RNC programs. However, many lenders appear to feel that there is market potential for both ENERGY STAR loans and EEMs. Since there is significant support for these loans in the secondary mortgage market and there are funds available through the Community Reinvestment Act, it may be appropriate for the Working Group to recommend some additional activity with lenders.

A. Secondary Mortgage Market Actors

Our research demonstrated that the secondary mortgage market is generally supportive of EEMs and ENERGY STAR loans. The mortgage market purchasers, Fannie Mae and Freddie Mac will purchase EEMs. In addition, since most ENERGY STAR loans are essentially the same as conventional loans (the incentive is usually associated with the application fee or closing costs), there are no secondary mortgage market barriers to these loans either.

FHA, the federal mortgage insurer, also supports EEMs and ENERGY STAR loans. It is not clear whether commercial mortgage insurers are willing to support these products. The Working Group may need to work with commercial insurers in New Jersey to help support this part of the market.

B. EEM and ENERGY STAR Mortgage Marketing

In order to support financing for energy efficiency in the residential sector, the Working Group should consider marketing EEMs and ENERGY STAR loans in New Jersey. However, the responses from lender suggest that marketing efforts need to be reorganized and refocused in order to be successful. Specific recommendations from lenders include:

- *Secondary Mortgage Market*: Lenders are very concerned about their ability to sell their mortgages in the secondary market and to insure their mortgages. Any attempt to market

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these products to lenders should include a clear statement of the secondary market implications.

- *Contacts with Lenders*: Contacts with lenders need to be much more systematic and consistent. There is considerable turnover and movement in the lending industry. In order to ensure that a product is developed and used, there needs to be regular contact to ensure that lenders have all the information that they need about a program and to ensure that new loan officers are given information about these lending products.

- *Support for Lenders*: One of the lenders expressed dissatisfaction with the support received under the ENERGY STAR program. Others expressed that they would need ongoing support to make this loan product attractive. It appears that lenders are not getting this support from the federal ENERGY STAR program. To be successful, an ongoing support mechanism would be needed, particularly with marketing materials and establishing linkages with ENERGY STAR builders.

- *Incentives*: A number of lenders suggested that incentives supplied by the utilities would be the most effective marketing device.

The lenders appear to think that the loan products could be attractive to both lenders and homebuyers. However, they would expect significantly more support from utilities through the RNC programs.

C. Community Reinvestment Act Funds

Many of the lenders that we interviewed told us that their preferential mortgage products are developed in response to requirements under the Community Reinvestment Act. Most of these institutions have existing plans for how those funds are to be distributed. However, there may be some opportunity to develop more attractive energy efficiency loan packages through use of CRA funds.

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Residential New Construction Attitude and Awareness Baseline Study

Real Estate Agent Survey

Report on Findings

Prepared for the New Jersey Residential New Construction Working Group

December 2000

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Executive Summary

This Report presents the findings from the Real Estate Agent Survey for the New Jersey Residential New Construction Awareness and Attitudinal Baseline Study (RNC study). A summary report, entitled *Residential New Construction Attitude and Awareness Baseline Study-Integrated Summary: Report on Findings*, consolidates information from this and other research tasks conducted for the RNC Study.

A. Background

The New Jersey Residential New Construction Working Group (Working Group), which consists of Public Service Electric &Gas Company, GPU Energy, Conectiv Power Delivery, NUI Elizabethtown Gas Company, South Jersey Gas, Rockland Electric Company, and New Jersey Natural Gas Company, is charged with developing and implementing a coordinated, statewide utility residential new construction program that will increase the energy efficiency of new homes constructed in New Jersey. In support of that effort, the Working Group has commissioned a comprehensive study of New Jersey's residential new construction market with the following goals.

- *Baseline Measurement*: The primary objective of the study is to establish a baseline that documents the current market for ENERGY STAR homes.
- *Program Design and Implementation*: The secondary objective of the study is to enhance the Working Group's understanding of the residential new construction market.
- *Customer Sited Clean Generation*: In addition, this study will support the work of the Customer Sited Clean Generation Working Group (CSCG Working Group).

The Working Group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study. The purpose of this survey is to obtain information on the current and potential roles of real estate agents in encouraging homebuyers to purchase energy efficient homes. In phase one, we collected background information

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on the licensing and training of real estate agents. In phase two, we conducted 51 interviews with real estate agents working in the new residential construction market in New Jersey. We restricted eligibility for the survey to agents with at least five years of full-time experience, at least 12 home sales in 1999, and at least three new home sales during 1999.

B. Awareness and Attitudes Findings

The primary goal of the Real Estate Agent Survey is to establish a baseline against which market changes resulting from the utilities' residential new construction program can be measured. To meet this goal, the Real Estate Agent Survey collected information on awareness of and attitudes toward the ENERGY STAR Homes program and the existing utility residential new construction programs. The awareness and attitude findings include the following.

- *Awareness of Existing Programs*: About one-fourth of agents are aware of each existing program, and about one-half of agents have heard of at least one of the three existing programs. Very few agents are aware of the Federal Environmental Protection Agency's (EPA) ENERGY STAR Homes program.

- *Awareness of Program Requirements and Benefits*: Most agents characterize ENERGY STAR homes as energy efficient homes that have lower energy bills. Very few agents are aware of the program's home rating requirements or think of the homes as offering homeowners any other benefits.

- *Recommendations to Customers*: About 20% of the agents who are aware of the existing utility programs "usually" or "sometimes" recommend these programs to customers.

- *Participation in the Program*: Despite the low recommendation rate, about one-fourth of the agents who are aware of the programs have been involved in the sale of a certified home. Moreover, about one-fourth of agents report that they have customer inquiries about the existing utility programs.

There is a moderate, but apparently superficial, level of awareness of the existing utility residential new construction programs. Some agents actively recommend these programs to their customers.

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However, some of the awareness of agents is the result of homebuyer interest in the existing utility programs, independent of real estate agent initiatives.

C. Agent Perceptions of Homebuyers and Builders

The second purpose of the Real Estate Agent Survey is to help the Working Group to improve its new coordinated statewide program design by enhancing its understanding of how the residential new construction market works and of the barriers and opportunities for the ENERGY STAR Homes Program. The survey furnishes three important findings about real estate agents' perceptions of homebuyer purchase decisions.

1) *Attribute Ratings*: Most real estate agents perceive that the attribute "lower utility bills" is important to homebuyers, while few agents perceive that other ENERGY STAR home attributes such as "indoor air quality," "lower noise levels," and "certified as energy efficient" are important to homebuyers.

2) *Homebuyer Awareness*: Most real estate agents report that homebuyers "usually" or "sometimes" ask about certain measures of energy efficiency such as insulation R-value and energy-efficient windows. Few real estate agents report that homebuyers ask about other measures of energy efficiency, such as duct tightness and air infiltration rates, implying that those measure are less well known among homebuyers.

3) *Agent Selling Techniques*: Real estate agents appear to follow consumers rather than lead them. Agents tend to sell homes using the measures of energy efficiency that are well known by homebuyers, rather than attempting to educate homebuyers about other measures of energy efficiency.

In their purchase of upgrades, real estate agents perceive that homebuyers focus mainly on appearance and comfort. Moreover, real estate agents perceive that appearance is the factor that gets the most attention from builders, while energy costs gets the least attention. Only about one-third of agents are aware of any builders that promote their homes as energy efficient.

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D. Recommendations for RNC Programs

New Jersey's sponsoring utilities will need to make choices on how to allocate funds to the residential new construction market transformation programs. Agents were asked about their perceptions of the best strategies for reaching consumers and were asked to suggest what type of training they would find most useful.

1) *Who Influences Homebuyers*: The survey shows that real estate agents believe that the experiences of other homebuyers have the greatest influence on the decisions of new homebuyers. They also perceive that real estate agents and builders influence consumers.

2) *What Messages Influence Homebuyers*: Agents perceive that dollars and cents messages would have the greatest influence on homebuyers, but there was no consensus among agents regarding the most effective vehicle for getting that message to homebuyers.

3) *How Should Agents Be Trained*: The survey shows that most agents regularly receive training but that few have ever received training on energy efficiency. It also shows that most agents think that training on energy efficiency programs would be at least somewhat helpful and that at least four in ten definitely would attend such training. Although most currently receive training from their office or from the NJ Association of Realtors, most recommend that the utilities offer this training directly to agents.

In combination with the findings from the other RNC surveys, these findings may help to guide the utilities' RNC marketing efforts.

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I. Introduction

The purpose of this report is to furnish information on the findings from the Real Estate Agent Survey for the New Jersey Residential New Construction Awareness and Attitudinal Baseline Study (RNC study). This report furnishes background information on the survey, an overview of the survey methodology, baseline statistics on ENERGY STAR awareness and attitudes, agent perceptions of other market actors, and agent recommendations on market transformation strategies. A separate report presents detailed information on the survey methodology. A summary report consolidates the information from the series of research tasks conducted for the Residential New Construction Attitude and Awareness Baseline Study.

A. Background

The New Jersey Residential New Construction Working Group (Working Group), which consists of Public Service Electric &Gas Company, GPU Energy, Conectiv Power Delivery, NUI Elizabethtown Gas Company, South Jersey Gas, Rockland Electric Company, and New Jersey Natural Gas Company, is charged with developing and implementing a coordinated, statewide utility residential new construction program that will increase the energy efficiency of new homes constructed in New Jersey. In support of that effort, the Working Group has commissioned a comprehensive study of New Jersey's residential new construction market with the following goals.

- *Baseline Measurement*: The primary objective of the study is to establish a baseline that documents the current market for ENERGY STAR homes against which market changes can be measured.

- *Program Design and Implementation*: The secondary objective of the study is to enhance the Working Group's understanding of the residential new construction market and to identify the opportunities and barriers associated with market transformation efforts.

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- *Customer Sited Clean Generation*: In addition, this study will support the work of the Customer Sited Clean Generation Working Group (CSCG Working Group) in its efforts to understand the market for CSCG technologies.

The working group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study. The study consists of 13 research components:

- Nonparticipating Homebuyer Study
- Participating Homebuyer Study
- Nonparticipating Homebuilder Study
- Participating Homebuilder Study
- Lender Study
- Residential Real Estate Appraiser Study
- Residential Real Estate Agent Study
- Building Inspector Study
- Trade Ally Study
- CSCG Analysis
- Residential New Construction Statistics
- Affordable Housing Organizations
- CSCG Industry Statistics

The 13 research tasks were conducted independently, since each required research and interviews with different market actors. However, all of the studies used common language and definitions so that the results are comparable across all studied market sectors.

B. Study Goals and Objectives

The purpose of this study is to obtain information on the current and potential roles of agents in encouraging homebuyers to purchase energy efficient homes. The study achieves this goal in three ways.

1) *Background Information*: The project team collected background information on licensing and training of real estate agents from the New Jersey Real Estate Commission, the

National Association of Realtors, and the New Jersey Association of Realtors.

2) *Baseline Attitudes and Awareness*: To measure baseline awareness of and attitudes toward the ENERGY STAR homes program and the existing utility-sponsored Residential New Construction programs, the survey asked real estate agents to discuss their awareness of and experience with these programs.

3) *Understanding the Residential New Construction Market*: The survey developed additional information on the residential new construction market to assist the utilities in their market transformation efforts. The survey asked agents to furnish insights into the key drivers for new homebuyers, to give advice on the most effective ways for utilities to promote energy efficient new homes to homebuyers and real estate agents, and to identify barriers to selling energy efficient new homes.

The study also supported the work of the CSCG Working Group. The survey asked real estate agents questions regarding their awareness of and attitudes toward CSCG technologies.

C. Target Population

Real estate agents play a modest role in the residential new construction market. They act as agents for buyers of new homes for about 25% of new home purchases (data from *Homebuyer Survey*). As such, real estate agents appear to have some ability to assist New Jersey's utilities in the market transformation process.

Not all real estate agents are part of the residential new construction market. The NJ Real Estate Commission reports that there are over 80,000 licensed real estate agents. Data from the DCA show that about 30,000 new homes are constructed each year, and our survey shows that agents who sell newly constructed homes sell an average of 10 new homes. Furthermore, data from the homebuyer surveys shows that only about 25% of New Jersey homebuyers use the services of real estate agents. That would suggest that as few as 7,500 New Jersey real estate agents sell homes in the residential new construction market.

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In the Real Estate Agent Survey, we interviewed real estate agents regarding their awareness of and attitudes toward existing and potential utility residential new construction programs. To ensure that we talked to agents who were familiar with the residential new construction market, we restricted eligibility for the survey to agents with at least five years of experience, at least 12 new home sales during 1999, and at least three new home sales during 1999.

D. Study Methodology

The study consisted of 51 telephone interviews with real estate agents working in the new residential construction market in New Jersey. In designing and conducting this study, we attempted to establish an appropriate balance among data quality, timeliness, and cost. We are confident that the procedures we used will furnish reliable information to the Working Group. However, it is important for data users to understand the procedures employed and any limitations resulting from the procedures that were selected. Moreover, since this is a baseline study, any subsequent study that attempts to measure a change in the residential new construction market must use similar procedures to ensure that measured changes are defensible.

The *Real Estate Agent Survey Methodology Report* furnishes detailed information on the survey procedures. The following are of the most important aspects of the design and implementation of the survey.

- *Sample Frame*: The sample frame for this study was a commercially available list of real estate offices.

- *Sample Selection*: We selected a PPS sample of real estate offices. The measure of size for the PPS sample was the number of employees in the office.

- *Respondent Contact*: We sent an advance letter to sampled real estate offices describing the purpose of the survey and the qualifications for an eligible survey respondent. We contacted the office gatekeeper by telephone and asked the gatekeeper to nominate an agent in the office that met the survey eligibility criteria. We contacted the nominated agent and conducted a telephone interview.

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- *Interview*: The interview was administered by a Computer-Assisted Telephone Interviewing (CATI) system. The average length of the interview was 34 minutes.

- *Incentive*: Each respondent was sent a $25 check for participation in the interview.

The study attained a 41% response rate.

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II. Baseline Awareness and Attitude Measures

The primary goal of the Real Estate Agent Survey is to establish a baseline against which market changes resulting from the utilities' residential new construction programs can be measured. To meet this goal, the Real Estate Agent Survey collected information on awareness of and attitudes toward the ENERGY STAR Homes program and the existing utility residential new construction programs. In this section of the report, we identify the key awareness and attitude measures, and furnish baseline statistics on their current levels.

The survey findings demonstrate that some real estate agents are aware of the existing residential new construction programs, are knowledgeable about the programs, and are actively involved in the promotion of homes built to the program standards. However, the survey demonstrates that the new statewide program faces two important challenges. First, since some agents are already active participants, the statewide program will have to make sure that agents understand the transition from the existing utility-specific programs to the new statewide program. Second, since active participation by agents is still fairly low (less than 20%), the new statewide program needs to find ways to effectively communicate the benefits of the ENERGY STAR Homes program to a broader group of real estate agents.

A. Awareness and Attitude Measures

Three New Jersey electric utilities have had residential new construction programs. GPU Energy's program is the Good Cents Program. Conectiv Power Delivery's program is the ENERGY STAR Homes Program. PSE&G's program is the EEH Five Star Program. Each of these programs had different goals, objectives, and procedures. As a result of restructuring legislation passed early in 2000, all of New Jersey's electric and gas utilities are participating in a coordinated, statewide residential new construction program. The new program will have a common set of goals, objectives, and procedures. In the baseline survey, we measure awareness of and attitudes toward the existing programs. In any follow-up research, one would measure the change in awareness and attitudes resulting from the implementation of the statewide program.

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In the survey we measured awareness separately for each of the three existing utility programs and for the national ENERGY STAR Homes program. We measured awareness at three levels.

1) *Awareness of Program*: the agent's awareness of the named program.

2) *Awareness of Program Requirements*: the agent's knowledge of how a home qualifies for the named program.

3) *Awareness of Program Benefits*: the agent's knowledge of the benefits that the named program delivers to homeowners.

These measures inform us about agents' awareness of the programs, and their depth of knowledge about the programs. In addition, we asked agents to tell us the source of their information about residential new construction energy efficiency programs.

In the survey, we measured attitudes separately for each of the three existing utility programs and for the national ENERGY STAR Homes program. We measured the agent's attitudes toward the program as a function of his or her involvement with the program.

1) *Recommendations to Customers*: how often the agent recommended that a customer consider the program.

2) *Involvement in a Sale*: whether the agent has ever been involved in the sale of a home in the program.

3) *Customer Inquiries*: if a customer ever asked the agent about the program.

These measures furnish a realistic assessment of the extent to which agents are currently promoting these energy efficiency programs.

In part, the involvement of agents in promoting energy efficiency is limited if they are not aware of specific builders who promote their products as energy efficient. We asked agents if they are aware of builders who built to program standards and if they are aware of builders who promote their homes as energy efficient.

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B. Baseline Awareness Measures

The baseline awareness measures show that some real estate agents are aware of the existing utility residential new construction energy efficiency programs and have a basic understanding of the program procedures and objectives.

Table 2.1 summarizes awareness of each utility program, awareness of the EPA ENERGY STAR Homes program, and awareness of any of the four programs. Each of the existing utility programs is known by about one-fourth of the real estate agents. (*Note: The existing differences in awareness among the three utility programs are not statistically significant.)* Very few of the agents (just 2 out of 51) are aware of the EPA's ENERGY STAR Homes program, even though homes in the PSE&G and Conectiv programs meet EPA ENERGY STAR Homes requirements. More than half of the interviewed real estate (57%) agents are aware of at least one of the four programs.

Table 2.1: Program Awareness

	Program Sponsor				
Response	**Conectiv**	**GPUE**	**PSE&G**	**EPA**	**Any Program**
Aware	25%	27%	31%	4%	57%
Not aware	75%	73%	69%	96%	43%

Table 2.2 summarizes agents' perceptions of how a home qualifies for the existing utility residential new construction program. Comparatively few agents are able to explain to customers that these homes are inspected and certified as energy efficient. The majority know only that the programs produce energy efficient homes or do not know what benefits the programs offer.

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Table 2.2: Awareness of Existing Utility Program Requirements *(Agents Aware of Program)*

Response	Program Sponsor		
	Conectiv	GPUE	PSE&G
Energy efficient	54%	29%	44%
Inspected by rater	23%	29%	13%
Certified by utility	8%	7%	6%
Don't know	15%	36%	31%

Table 2.3 summarizes agent perceptions of the benefits that program homes deliver to homeowners. Most agents are aware that the homes have lower energy costs than other homes. Some also mention lower maintenance costs and higher resale value for program homes. However, there is very low awareness of many other selling points of ENERGY STAR homes.

Table 2.3: Awareness of Existing Utility Program Benefits *(Agents Aware of Program)*

Response	Program Sponsor		
	Conectiv	GPUE	PSE&G
Reduced energy costs	92%	79%	75%
Lower maintenance costs	46%	14%	38%
Longer useful life of home, appliances, and/or equipment	23%	0%	0%
Higher resale value	15%	21%	25%
Better indoor air quality	8%	7%	0%
Environmentally friendly	8%	0%	0%
Great comfort	8%	7%	6%
Less noise	0%	0%	0%
Other	8%	7%	6%
Don't know	0%	14%	19%

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An agent is likely to have more complete information about residential new construction energy efficiency programs if he or she receive the information directly from the sponsoring utility. Table 2.4 summarizes the source of agents' information about these programs. Some agents have received information from utilities, while others report seeing information in the media (advertisements or articles) or being informed of the program by builders. There does appear to be some difference among the three programs in the source of information about the program. However, since the three programs have achieved a similar level of awareness, it is not clear that any difference in how the awareness level was achieved is significant.

Table 2.4: Source of Information on Existing UtilityProgram *(Agents Aware of Program)*

	Program Sponsor		
Response	**Conectiv**	**GPU**	**PSE&G**
Utility company	15%	21%	13%
Other agents	23%	7%	0%
Builder or contractor	15%	7%	38%
Retail displays or sales staff	8%	0%	0%
Media advertisements	8%	43%	19%
Media articles	8%	14%	13%
Trade association	8%	0%	0%
Personal sources	8%	0%	0%
Other	0%	14%	7%
Don't know	15%	7%	13%

In summary, more than 50% of real estate agents are aware of at least one of the existing utility residential new construction energy efficiency programs, and some agents are aware of more than one program. Most agents think of these programs as selling more energy efficient homes that lower monthly utility costs. Few agents mention that these homes are certified to meet certain energy efficiency standards. Few agents mention comfort, health, and social responsibility as attributes of homes participating in the current

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programs. These findings suggest that the existing utility programs have achieved a moderate level of name recognition among real estate agents but that most real estate agents have a superficial understanding of the programs.

C. Baseline Attitude Measures

Real estate agents are not currently active market transformation agents. Although some agents have suggested to some of their customers that the programs are worth investigating, very few make it a practice to recommend homes built through the existing utility RNC programs, and even fewer have been involved in the purchase of one of these homes.

In the survey, we asked real estate agents "how often you recommend that a customer . . . consider one of the existing residential new construction energy efficiency programs." Table 2.5 shows that about one-third of agents who are aware of an existing utility program have recommended it to customers. Among all agents (including both those who are aware of programs and those that are not aware of programs), 14% "usually" or "sometimes" suggest that their customers consider one of these programs.

Table 2.5: Recommend an Existing Utility Program to Customers ***(Agents Aware of Program)***

	Program Sponsor		
Response	**Conectiv**	**GPUE**	**PSE&G**
Usually	8%	7%	0%
Sometimes	23%	14%	13%
Rarely	0%	7%	19%
Never	69%	64%	69%

Table 2.6 illustrates that about one-fourth of agents aware of the programs have been involved in the sale of a qualifying home. Among all agents (including both those who are aware of programs and those that are not aware of programs), 20% have been involved in the sale of a qualifying home.

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Table 2.6: Sales of Certified Homes *(Agents Aware of an Existing Utility Program)*

Response	Program Sponsor		
	Conectiv	GPUE	PSE&G
Yes	23%	29%	19%
No	77%	71%	81%

Table 2.7 shows that some agents aware of the existing utility programs have had customer inquiries regarding one of the programs. Among all agents (including both those who are aware of programs and those that are not aware of programs), 18% have had a customer ask them about one of the programs. The rate of customer inquiries is almost as high as the rate of real estate agent activity, suggesting that some share of agent awareness of the programs results from customer inquiries.

Table 2.7: Customer Inquiries *(Agents Aware of an Existing Utility Program)*

Response	Program Sponsor		
	Conectiv	GPUE	PSE&G
Yes	8%	29%	25%
No	92%	71%	75%

In summary, we find that some real estates agents have a positive attitude toward the existing utility programs. Among agents who are aware of the program, only one-third have suggested that their customers consider homes built under one the programs. However, a small group of agents are apparently active program participants. About 16% of agents usually or sometimes suggest that a customer consider homes built to existing utility program standards, and about 20% of agents have been involved in the sale of a home built to program standards. A factor that may contribute to agents' attitudes toward the program is customer interest. About 18% of agents report that at least one customer has asked them about one of the existing utility residential new construction energy efficiency programs.

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III. Agent Perceptions of Homebuyers and Builders

The second purpose of the Real Estate Agent Survey is to improve the new RNC program design by enhancing the Working Group's understanding of how the residential new construction market works, and of the barriers and opportunities for the ENERGY STAR Homes Program. To help meet this objective, the Real Estate Agent Survey asked real estate agents to discuss their strategies for marketing new homes, their perceptions of the attributes of new homes that are most important to homebuyers, and their perceptions of the behaviors of homebuilders. In this section of the report, we furnish information on the factors that real estate agents perceive to be the most important in selling new homes.

The survey furnishes three important findings about real estate agents' perceptions of the homebuyer purchase decision.

1) Real estate agents perceive that lower utility bills are an important factor in a homebuyer's selection of a home, while other ENERGY STAR home attributes such as indoor air quality, lower noise levels, and certified as energy efficiency are significantly less important.

2) Most real estate agents report that homebuyers usually or sometimes ask about better known measures of energy efficiency such as insulation R-value and window efficiency, while few real estate agents report that homebuyers ask about less well known measures of energy efficiency, such as duct tightness and air infiltration rates.

3) Real estate agents appear to follow consumers rather than lead them. Agents tend to sell homes using the measures of energy efficiency that are well known to homebuyers, rather than attempting to educate homebuyers about other measures of energy efficiency.

In homebuyer purchase of upgrades, real estate agents perceive that homebuyers focus mainly on appearance and comfort. Moreover, real estate agents perceive that appearance is the factor that gets the most attention from builders, while energy costs get the least attention. Only about one-third of agents are aware of any builders that promote their homes as energy efficient.

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A. Key Factors in Homebuyer Purchase Decisions

The primary attributes of a new home for most homebuyers are location, square footage, price, housing unit type, floor plan, and schools (for households with children). Homebuyers attempt to find housing that represents an appropriate compromise on these attributes. Given these, a homebuyer may be influenced in the selection of a specific home by secondary attributes such as quality of construction or energy efficiency. In the survey, we asked agents to tell us which attributes they thought were most important to homebuyers. These questions show what real estate agents think is the importance of energy efficiency to homebuyers, as well as the potential value of other attributes in marketing ENERGY STAR homes.

Real estate agents were asked to rate the importance certain factors "in terms of influencing a person's decision to buy a home." For each factor, the statistics in Table 3.1 show the percent of agents who felt that factor was very important, and the percent who felt that the factor was somewhat important. For most attributes, the agents report that the attribute is at least somewhat important. We interpret that to mean that homes must achieve an acceptable level on all attributes (e.g., if the home had poor indoor air quality, homebuyers would reject the home). Therefore, we focus our analysis on the percentage of agents who rate a factor as very important.

Table 3.1: Importance of Factors in Purchase Decisions

Factor	Very Important	Somewhat Important
Higher resale value	84%	16%
Lower utility bills	57%	39%
Lower maintenance costs	57%	33%
Higher quality of construction	45%	53%
Better indoor air quality	35%	47%
Lower noise levels	31%	55%
Certified as energy efficient	22%	63%
Longer useful life of equipment	18%	63%

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Table 3.1 shows that lower utility bills and lower maintenance costs are two of the most important factors associated with homebuyer purchase decisions, rated as very important by 57% of agents. Only higher resale value is rated higher. On the other hand, "rated as energy efficient" was thought to be very important by only 22% of agents. Moreover, only a few agents thought that other potential benefits of building to an ENERGY STAR standard, such as lower noise levels and better indoor air quality are very important. During the informal background research that we conducted to develop the Real Estate Agent Questionnaire, agents told us that they think "dollar and cents issues" are important to homebuyers.

Agents were asked to further quantify the share of homebuyers who asked about energy efficiency in different market segments. Among customers purchasing homes valued at less than $150,000, the median response by agents was that two out of ten would ask about the energy efficiency of a new home. Among customers purchasing homes valued at $150,000 to $300,000, the median response by agents was that five out of ten would ask about the energy efficiency of a new home. Among customers purchasing homes valued at more than $300,000, the median response by agents was that five out of ten would ask about the energy efficiency of a new home. It is the agents' perception that purchasers of more expensive homes would be more likely to consider the energy efficiency of a home when they purchase a home.

In thinking about selling energy efficiency to homebuyers, it is important to understand two other aspects of the market: what measures homebuyers associate with energy efficiency and the extent to which real estate agents are proactively selling energy efficiency. Table 3.2 presents two sets of statistics—the percentage of agents who find that homebuyers usually or sometimes ask them about listed energy efficiency measures, and the percentage of agents who usually or sometimes use an energy efficiency measure as a selling point. The table shows that real estate agents report that homebuyers are most likely to ask about insulation R-values, window efficiency, and air conditioning equipment efficiency, and are least likely to ask about air infiltration rates, duct tightness, and lighting efficiency. The table also shows that real estate agents use as selling points the measures that customers ask about. It does not appear that they proactively inform homebuyers about the value of energy efficiency measures.

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Table 3.2: Importance of Energy Efficiency Measures

Factor	Customers "usually or sometimes ask about"	Agents "usually or sometimes use as a selling point"
Insulation R-value	76%	69%
Window efficiency	75%	76%
Air-conditioning equipment sizing	71%	67%
Air-conditioning efficiency rating	59%	57%
Presence of programmable thermostat	49%	47%
Heating efficiency rating	47%	43%
Presence of basement insulation	33%	35%
Appliance efficiency ratings	31%	37%
Lighting efficiency	25%	24%
Duct tightness / insulation	20%	18%
Air infiltration rates	12%	12%

B. Purchase of Upgrade Packages

One option for a coordinated residential new construction energy efficiency program is to ask builders to make ENERGY STAR available as an upgrade package for homebuyers. In that way, the builder could make ENERGY STAR available to homebuyers with an interest in energy efficiency but would not be required to build an entire development to ENERGY STAR specifications. In the Real Estate Agent Survey, we asked agents to talk about the share of customers who bought upgrades and the types of upgrades that customers are likely to purchase.

A majority of real estate agents (60%) report that more than 75% of their customers purchased an upgrade as part of the home purchase, demonstrating that it is common for homebuyers to purchase an upgrade package. Table 3.3 shows what real estate agents perceive to be the customer's motivation for purchasing an upgrade. Appearance and comfort seem to be the focus for most upgrades. Energy efficiency is the least likely reason for an upgrade; however, about one in four upgrades apparently involves an increase in energy efficiency. The low rate for energy efficiency may be as much a

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result of the limited availability of energy efficiency upgrades as it is a function of a customer's interest in purchasing such an upgrade.

Table 3.3: Importance of Factors in Upgrades Decisions

Factor	Very Important	Somewhat Important
Appearance	90%	10%
Comfort	73%	25%
Quality	49%	47%
Convenience	47%	49%
Durability	45%	53%
Maintenance costs	41%	53%
Energy efficiency	24%	69%

C. Perceptions of Builder Practices

Real estate agents who sell homes in the residential new construction market have the opportunity to see the products of many different builders. Subject to the limitations of their technical knowledge about energy efficiency, they are among the best informants regarding the energy practices of builders. In the survey, we asked agents how much attention builders pay to various aspects of construction in different market segments. Table 3.4 shows the perceptions of agents regarding the percentage of builders who pay a lot of attention to each of the listed home attributes for the three market segments.

It is the perception of real estate agents that, for all market segments, appearance is the attribute to which builders pay most attention when constructing a home. The second tier of attributes includes convenience, durability, and quality of workmanship. The attributes to which agents perceive that builders pay the least attention are comfort, maintenance costs, and energy costs. In the higher-priced market segments, agents perceive that builders pay more attention to building homes with each of the listed attributes. However, the ranking of attributes remains roughly the same.

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Table 3.4: Builder Attention to Home Attributes

Attribute	Market Segment		
	Less than $150,000	$150,000 to $300,000	More than $300,000
Appearance	49%	75%	94%
Convenience	20%	31%	69%
Durability	14%	35%	69%
Quality of workmanship	18%	31%	67%
Comfort	12%	31%	71%
Maintenance costs	6%	22%	49%
Energy costs	4%	16%	43%

Few real estate agents are aware of builders who participate in one of the RNC programs. Only 18% know of a builder who promotes homes under the ENERGY STAR logo, 12% know of a GOOD CENTS builder, and 8% know of an EEH 5 Star builder. Only about one-third of the agents "are aware of a builder in the area . . . who promotes his/her homes as energy efficient."

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IV. Recommendations for Coordinated Statewide RNC Programs

New Jersey's utilities will need to make choices on how to allocate funds to the residential new construction market transformation programs. In the Real Estate Agent Survey, we collected information that can contribute to that decision. Agents were asked about their perceptions of the best strategies for reaching consumers and were asked to suggest what type of training they would find most useful. In combination with the findings from the other RNC baseline surveys, these perceptions should help the Working Group to suggest an effective allocation of resources.

The survey shows that real estate agents believe that the experiences of other homebuyers have the greatest influence on the decisions of new homebuyers. They also perceive that real estate agents and builders influence consumers. Agents perceive that dollars and cents messages would have the greatest influence on homebuyers, but there is no consensus among agents regarding the most effective way to reach homebuyers.

The survey shows that most agents regularly receive training, but few have ever received training on energy efficiency. It also shows that most agents think that training on energy efficiency programs would be at least "somewhat helpful" and that at least four in ten "definitely would" attend such training. Although most agents currently receive training from their office or from the NJ Association of Realtors, most recommend that the utilities offer energy efficiency training directly to agents.

A. Strategies for Marketing RNC Programs to Homebuyers

Real estate agents have direct contact with homebuyers. We asked them to relate to us their perceptions of who exerts the most influence on homebuyers, what marketing messages would speak most directly to homebuyers, and what marketing strategies would reach homebuyers.

Table 4.1 shows the influence that various market actors have on "a homebuyer's decision to buy a particular type of home." According to agents, family and friends have the greatest influence on homebuyer purchase decisions, and real estate agents are a close

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second. Only about one-third of agents think that builders have a lot of influence, and fewer than one in five agents think that the news media, the Internet, or consumer advocates have a lot of influence. Therefore, from the agent's perspective, positive consumer experiences with ENERGY STAR homes are most likely to translate into greater consumer interest in energy efficiency.Getting agents and builders to see the benefits of the program should also help utilities to market more energy efficient homes.

Table 4.1: Influence on Homebuyer's Purchase Decision

Factor	"A lot of influence"	"Some influence"
Family and friends	61%`	31%
Real estate agents	53%	39%
Builders	35%	61%
News media	16%	63%
Internet	16%	61%
Consumer advocates	14%	35%

Table 4.2 shows what messages agents feel would be most influential in attempting to sell energy efficient homes. Agents perceive that dollars and cents messages would have the greatest influence on consumers. They perceive that other attributes (e.g., comfort and environmental responsibility) would be less influential.

Table 4.2: Effectiveness of Test Messages

Message	"A lot of influence"	"Some influence"
ENERGY STAR homes will save 30% on energy costs	59%	35%
ENERGY STAR homes have a greater resale value	49%	39%
ENERGY STAR homes provide more home for the money	41%	41%
ENERGY STAR homes are quieter, more comfortable homes	29%	55%
ENERGY STAR homes are better for the environment	25%	51%

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Table 4.3 shows which marketing strategies would be most effective in reaching consumers. No consensus approach is suggested by agents. Working through builders and real estate agents is mentioned, as are various types of advertising. Based on agents' experiences, however, no single approach would reach all new homebuyers.

Table 4.3: Marketing Strategies

Marketing Strategy	Percent of agents identifying this as an effective strategy for marketing energy efficient homes
Publicity through builders	25%
Publicity through agents	20%
TV / Radio advertisements	18%
Newspaper advertisements	16%
Rebates and other monetary incentives	14%

B. Training for Real Estate Agents

It is clear from this research that real estate agents have a limited understanding of the ENERGY STAR homes program. One way for the utilities to inform and educate agents would be through training programs. In the survey, real estate agents were asked to indicate whether they would be interested in training and to identify the type of training that they would find most valuable.

Three out of four agents surveyed had participated in some form of training in the last year. They were most likely to have received training on the use of the Internet and on sales techniques. For most, the training was organized either by their own real estate office or by the New Jersey Association of Realtors. It is clear that agents receive training on a regular basis.

Only one in five agents has *ever* received training on energy efficiency programs. Among those who received training, about one-third received it from the New Jersey Association of Realtors, and about one in five received it from builders. Most agents who received the training think it was very helpful.

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About one-third of agents think that training on the ENERGY STAR homes program would be very helpful and almost half say that they would definitely attend such training. An overwhelming majority of agents (69%) think that this training should be offered directly by the utility companies, not through the Association of Realtors or builders.

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Residential New Construction Attitude and Awareness Baseline Study

Residential New Construction Statistics

Report on Findings

Prepared for the New Jersey Residential New Construction Working Group

May 2001

Roper Number: NQTQ04

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Executive Summary

The purpose of this report is to furnish information on the findings from the Residential New Construction Statistics Task for the New Jersey Residential New Construction Awareness and Attitudinal Baseline Study (RNC study). This report identifies sources of residential construction data, describes what sources were obtained and statistics were developed, and presents detailed tables of statistics. A Summary Report consolidates the information from the series of research tasks conducted for the Residential New Construction Attitude and Awareness Baseline Study.

A. Background

The New Jersey Residential New Construction Working Group (Working Group), which consists of the Public Service Electric &Gas Company, GPU Energy, Conectiv Power Delivery, NUI Elizabethtown Gas Company, South Jersey Gas, Rockland Electric Company, and New Jersey Natural Gas Company, is charged with developing and implementing a coordinated, statewide utility residential new construction program that will increase the energy efficiency of new homes constructed in New Jersey. In support of that effort, the Working Group has commissioned a comprehensive study of New Jersey's residential new construction market with the following goals.

- *Baseline Measurement*: The primary objective of the study is to establish a baseline that documents the current market for ENERGY STAR homes.

- *Program Design and Implementation*: The secondary objective of the study is to enhance the Working Group's understanding of the residential new construction market.

- *Customer Sited Clean Generation*: In addition, this study will support the work of the Customer Sited Clean Generation Working Group (CSCG Working Group).

The Working Group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study.

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The purpose of this task is to develop an up-to-date characterization of the New Jersey new construction market. The study used three types of data to achieve this goal: public data sources, commercial databases, and RNC Baseline Survey data.

B. Residential Transactions

The Working Group requested data on "the total number of homes - new or existing – purchased each year." The New Jersey Division of Taxation is responsible for tracking information on the real estate transfer tax. However, the information available is not completely consistent with the Working Group's request. The Division of Taxation reports that there were 105,284 Class 2 Real Estate Transactions in FY 2000. This statistic excludes new homes sales and some other residential transactions.

Since the data from the Division of Taxation were not consistent with the Working Group's information request, we looked to the residential mortgage market as a source of additional information on real estate transactions. Mortgage data shows there were 134,605 home purchase mortgages in 1999.

C. Residential New Construction

In this Report, we present statistics that define the size and scope of the residential new construction market. These statistics were extracted from data furnished by the Division of Codes and Standards (DCS) in the NJ Department of Community Affairs and from the RNC Baseline Nonparticipating Homebuyer Survey.

1. Sources of Data on New Housing Units

DCS tracks three different types of information on new construction: building permits, Certificates of Occupancy, and Homeowner Warranties.

- *Building Permits*: The most comprehensive measure of residential new construction is "housing units authorized by building permits." However, permits overstate the number of housing units constructed in New Jersey each year.

- *Certificates of Occupancy*: COs are issued when a building is ready for occupancy. DCS staff believe that COs understate

the total number of housing units, and sometimes allocate housing units to the wrong time period.

- *Homeowner Warranty Registry*: The Registry is a reliable source of data on warranted houses. However, it does not include housing units built for lease and housing units for which the intended occupant serves as the general contractor, and understates the number of housing units constructed.

2. Number and Location of New Housing Units

Table 1 shows the three different estimates of the number of new housing units for 1999 by region. There are significant differences among the three estimates, particularly for the North Region. There were many more permits than COs. Both permit and CO estimates are higher than warranty estimates, since warranty data exclude most multifamily homes.

Construction trends derived from permit data are also different from the trends derived from COs data. Building permits have grown continuously over the last four years, while the number of COs issued has not followed a consistent pattern. Moreover, in 1997, there were more COs than permits.

Table 1: Estimates of New Housing Units by Region for 1999

Region	Source of Estimate		
	Permits	COs	Warrantees
North	12,610	6,973	5,905
Central	15,549	13,236	12,198
South	9,363	7,872	6,762
NEW JERSEY 1999	37,522	28,109	24,865
1998	*35,676*	*28,008*	
1997	*30,017*	*34,670*	
1996	*27,577*	*22,239*	

Source: *The New Jersey Construction Report – Annual Report for 1999* and special tabulations of the Homeowner Warranty Registry database.

3. Baseline Estimates of RNC Program Market Share

PSE&G, Conectiv Power Delivery, and GPU Energy had residential new construction programs in place prior to the baseline study. Table 2 shows the 1999 statistics for the existing

utility RNC programs. Two statistics are presented. "Certified Homes" includes only those housing units that have been completed and certified as meeting program requirements. "Homes in Contract" includes homes that were committed to the program in 1999, whether or not they were actually constructed.

Table 2: 1999 Utility Residential New Construction Participation

Program	Certified Homes	Homes in Contract
Conectiv / ENERGY STAR	27	349
GPU Energy / GoodCents	62	80
PSE&G / EEH 5 Star	684	1,024
NEW JERSEY	746	1,453

Source: PSE&G, Conectiv Power Delivery, and GPU Energy

We recommend computing a baseline market share for the utility RNC programs as "Certified RNC Program Homes" divided by the total number of homes for which a CO was issued. Using this definition, the RNC market share for 1999 was 746 of 28,109 or 2.6%. An alternative is to compute market share as "Homes in Contract" divided by the total number of building permits. Since "Homes in Contract" and building permits do not always get built, we would recommend against using those numbers to compute the program Baseline.

4. Characteristics of New Housing Units

The information sources developed for this study help us to better understand the characteristics of new residential construction in New Jersey. Table 3 furnishes summary data on the characteristics of new housing units, including: main heating fuel, market share of production homes, market share of affordable housing programs, square footage, price, and housing unit type.

The Baseline Survey shows that most owner-occupied newly constructed housing units use natural gas as the main heating fuel (93%), are production homes (88%), and are not part of an affordable housing program (95%). The median housing unit size, for those respondents who furnished an estimate of housing unit size is about 2,300 square feet. The median price of a home

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for which a homeowner warranty was issued was $221,750, with about one-fourth of homes selling for less than $150,000, half selling for $150,000 to $300,000, and one-fourth selling for more than $300,000. Eighty-seven percent of COs were issued for 1 & 2 family housing units, 11% for multifamily housing units, and 2% for housing units in mixed-use buildings.

Table 3: Other New Home Characteristics

Characteristic	Category		
Main Heating Fuel (Baseline Survey)	**Gas**	**Electric**	**Other**
	93%	3%	4%
Production/Custom (Baseline Survey)	**Production**	**Custom**	
	88%	12%	
Affordable Housing (Baseline Survey)	**Not Part of Affordable Housing Program**	**Part of Affordable Housing Program**	
	95%	5%	
Square Footage (Baseline Survey)	**Less than 1800**	**1800-2500**	**More than 2500**
	20%	27%	32%
Sales Price (Warranty Registry)	**Less than $150,000**	**$150,000-$300,00**	**More that $300,000**
	22%	50%	28%
Housing Unit Type (CO Data)	**1 & 2 Family**	**Multifamily**	**Mixed Use**
	87%	11%	2%

5. Prefabricated Housing

There are two types of prefabricated housing; manufactured housing and modular housing.

Manufactured housing is factory built and subject to HUD regulation. Our source at the New Jersey Manufactured Housing Association (NJMHA) reports that "mobile" homes were replaced in 1976 by manufactured housing. According to the Manufactured Housing Institute, 644 manufactured housing units were shipped to New Jersey in 1999.

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According to the State of New Jersey, modular or industrialized housing is any building of closed construction, including, but not limited to, modular housing that is factory built single-family and multi-family housing (including closed wall panelized housing) and other modular nonresidential buildings. Modular homes are subject to standard inspections and require a CO. They must be registered with the Homeowner Warranty Program. They also get a "seal" from the New Jersey Industrialized Building Commission. According to the Industrialized Building Commission, for fiscal 2000 (July 1999 - June 2000) 48 modular housing units were shipped to New Jersey. However, the Homeowner Warranty Registry lists 588 modular units. We have not been able to resolve this discrepancy.

D. Residential Additions and Alterations

The Working Group is interested in the number and economic value of additions and alterations done each year. The Division of Codes and Standards collects information on building permits for additions and alterations. Table 4 presents information on the number and value of additions and alterations by region for 1999.

The total value of permits for additions and alterations is $1.7 billion, about half the size of the $3.6 billion residential new construction market. However, while the average dollar value of new construction is about $100,000 per unit, it is only $8,000 for additions and alterations.

Table 4: 1999 Additions and Alterations to Residential Structures by Region

County	Permits for Additions and Alterations	Total Value ($ millions)
North Region	106,960	$44.1
Central Region	80,923	$271.4
South Region	44,971	$52.6
State Totals	**232,854**	**$1,747.2**

SOURCE: New Jersey Department of Community Affairs, Division of Codes and Standards

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I. Introduction

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- *Customer Sited Clean Generation*: In addition, this study will support the work of the Customer Sited Clean Generation Working Group (CSCG Working Group) in its efforts to understand the market for CSCG technologies.

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The working group contracted with Roper Starch Worldwide Inc. and XENERGY Inc. to conduct the RNC study. The study consists of 13 research components:

- Nonparticipating Homebuyer Study
- Participating Homebuyer Study
- Nonparticipating Homebuilder Study
- Participating Homebuilder Study
- Lender Study
- Residential Real Estate Appraiser Study
- Residential Real Estate Agent Study
- Building Inspector Study
- Trade Ally Study
- CSCG Analysis
- Residential New Construction Statistics
- Affordable Housing Organizations
- CSCG Industry Statistics

The 13 research tasks were conducted independently, since each required research and interviews with different market actors. However, all of the studies used common language and definitions so that the results are comparable across all studied market sectors.

B. Study Goals and Objectives

The purpose of this task is to develop an up-to-date characterization of the New Jersey new construction market. The study used three types of data to achieve this goal.

1) *Public Data Sources*: The project team identified publicly-available data sources, documented the source and quality of those data sources, and developed statistics to address the questions framed by the RNC Working Group.

2) *Commercial Data Sources*: The project team identified commercially-available data sources, documented the source and quality of those data sources, and developed statistics to address the questions framed by the RNC Working Group.

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3) *Survey Data*: The project team used data from the surveys conducted for other research tasks to develop population estimates to answer certain questions framed by the RNC Working Group.

In two cases, the questions posed by the RNC Working Group could have been answered more thoroughly if the Working Group was willing to purchase an expensive database. We gave the Working Group the option to purchase the data. However, the Working Group did not feel that the detail furnished by the databases was an effective use of the RNC Working Group project budget.

C. Organization of Report

Under this task, we developed information in the following areas:

1) *Residential Transactions*: In Section II we present statistics on the size and geographic distribution of the residential real estate market in New Jersey.

2) *Residential New Construction*: In Section III, we present information on the size and geographic distribution of the residential new construction market. In addition, we present information on the characteristics of new housing units, including: housing unit type, manufactured housing units, custom built housing units, main heating fuel, "affordable" housing units, and price.

3) *Residential Additions and Alterations*: In Section IV, we present information on the size and geographic distribution of the remodeling market.

The Working Group also is interested in statistics on Homebuilders and Lenders. Those statistics are reported in the Homebuilder Report and the Lender Report.

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II. Residential Transactions

The primary goal of the Residential New Construction Working Group is to develop and implement a collaborative utility residential new construction program. However, each time a household purchases a home, new or existing, there is an opportunity for the household to make decisions that can enhance the efficiency of the energy usage in the home. In this section of the report, we present statistics that characterize the overall size and geographic distribution of the residential real estate market.

A. Residential Real Estate Transactions

The Working Group requested data on "the total number of homes - new or existing – purchased each year." The best source of information on residential real estate transactions is the New Jersey Department of Treasury's Division of Taxation. New Jersey levies a transfer tax on all real estate transactions. The Division of Taxation is responsible for tracking information on the real estate transfer tax.

However, the Division of Taxation does not keep information that is consistent with the Working Group's request. We were able to obtain two types of data from the Division of Taxation. First, the Division of Taxation reports that there were about 280,000 real estate transactions that were subject to the real estate transfer tax during FY 2000 (July 1, 1999 to June 30 2000). This number represents all transactions, including sales of land, commercial properties, and residential dwellings. Second, the Division of Taxation reports that there were 105,284 Class 2 Real Estate Transactions in FY 2000. This represents "usable" residential real estate transactions, and excludes residential land sales, new home sales, and sales that are not "at arm's length" (e.g., sales from one relative to another).

The Class 2 Real Estate Transaction data appear to furnish the best information to the Working Group. They appear to represent "arm's length" sales of existing homes and, when added to information on new home sales, give the Working Group some information on residential market activity. Table 2.1 furnishes information on the number of transactions and the mean sales price by county.

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Table 2.1: Class 2 Real Estate Transactions by County (July 1, 1999 Through June 30, 2000)

County	Number of Transactions	Mean Sales Price
Atlantic County	4,075	$128,387
Bergen County	11,355	$292,243
Burlington County	5,311	$143,128
Camden County	5,705	$112,336
Cape May County	3,725	$226,171
Cumberland County	994	$89,031
Essex County	7,470	$222,788
Gloucester County	2,591	$118,691
Hudson County	4,607	$168,580
Hunterdon County	1,802	$231,607
Mercer County	3,858	$187,345
Middlesex County	9,794	$163,055
Monmouth County	10,302	$220,637
Morris County	5,825	$290,790
Ocean County	10,000	$157,878
Passaic County	4,900	$186,226
Salem County	497	$107,994
Somerset County	2,600	$226,233
Sussex County	2,490	$163,590
Union County	6,071	$226,227
Warren County	1,312	$159,063
State Totals	**105,284**	**$197,072**

SOURCE: Department of the Treasury Division of Taxation database of Class 2 Real Estate Transactions for Fiscal 2000.

Table 2.2 summarizes the residential transaction data for the State. It shows that the North Region has the highest level of sales and the highest sales prices.

Table 2.2: Class 2 Real Estate Transactions by Region (July 1, 1999 Through June 30, 2000)

Region	Number of Transactions	Mean Sales Price
North Region	44,030	$235,183
Central Region	38,356	$187,118
South Region	22,898	$140,466
State Totals	**105,284**	**$197,072**

SOURCE: Department of the Treasury Division of Taxation database of Class 2 Real Estate Transactions for Fiscal 2000.

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B. Residential Home Purchase Mortgage Transactions

Since the data from the Division of Taxation were not consistent with the Working Group's information request, we looked to the residential mortgage market as a source of additional information on real estate transactions. While some homebuyers are able to purchase homes without a mortgage, a count of the number of mortgages for home purchases should give the Working Group a reasonable estimate of the size of the real estate market.

As a result of the Home Mortgage Disclosure Act, all mortgage transactions must be reported to the Federal Government. The government makes the data available to commercial vendors for processing. CBMI Corporation is one such mortgage data vendor. HMDA data was available for no charge from CBMI for 1997. We purchased state-level data from CBMI for 1999. (Note: The primary use for the mortgage data was to develop a list of the top 75 mortgage lenders for 1999 for the Lender Survey.) The HMDA database for 1999 was available from CBMI, but the Working Group chose not to purchase the data for county level analysis.

The CBMI data furnishes data on conventional, FHA/VA, and RHS/FSA mortgages for home purchases. Table 2.3 presents the state totals for each mortgage type and for all home purchase mortgages. The table shows that there were about 134,605 home purchase mortgages in 1999, up by more than 25% from 1997. These data show that the Class 2 real estate transaction data exclude a significant share of residential real estate transactions. A large part of the underreporting appears to result from the exclusion of the sale of new homes.

Table 2.3: Home Purchase Mortgages by Type and Calendar Year

Type	Year	
	1997	1999
Conventional	84,911	109,432
FHA/VA	19,282	24,589
RHS/FSA	226	584
All Types	104,429	134,605

Source: CBMI HMDA Data

III. Residential New Construction

In this Section, we present statistics that define the size and scope of the residential new construction market. These statistics were extracted from data furnished by the Division of Codes and Standards in the NJ Department of Community Affairs and from the RNC Baseline Nonparticipating Homebuyer Survey. As we review the statistics, it is clear that there is no definitive source of information on the number, location, and characteristics of new housing units. However, the information presented should be sufficiently accurate to furnish guidance to the Working Group for purposes of program design and assessment.

A. New Housing Units – Sources and Definitions

Three different data sources can be used to estimate the number of new housing units in New Jersey. The data sources are:

- *Building Permits*: The Division of Codes and Standards (DCS) in the NJ Department of Community Affairs (NJDCA) collects data from municipal construction officials regarding the number of housing units authorized each month.

- *Certificates of Occupancy*: DCS collects data from municipal construction officials regarding the number of housing units for which they have issued COs each month.

- *Homeowner Warranty Registry*: DCS maintains a registry of new home warranties for all warranted houses.

The most comprehensive measure of residential new construction is "housing units authorized by building permits." These statistics show the total number of new housing units *authorized* for construction by local construction officials. Authorized housing units, however, represent the *potential* amount of building, rather than the actual amount of building and therefore overstate the number of housing units constructed in New Jersey each year.

Certificates of Occupancy (COs) are issued when a building is ready for occupancy. However, DCS staff believe that CO reporting is less timely and complete than permit data reporting. So, though the number of COs appears to furnish a better measure of the number of

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new housing units, it may understate the total number of housing units, or it may allocate those housing units to the wrong time period.

The Homeowner Warranty Registry is a reliable source of data on warranted houses. However, two types of housing units do not require a home warranty in New Jersey; housing units built for lease and housing units for which the intended occupant serves as the general contractor. The warranty registry understates the total number of housing units constructed during a year.

B. Number and Location of New Housing Units

Table 3.1 presents statistics on the number of housing units by region that were authorized by building permits during 1999. Table 3.2 presents data on the number of housing units by region for which COs were issued during 1999. Table 3.3 presents data on the number of housing units by region for which a homeowner warranty was issued during 1999. Tables 3.4, 3.5, and 3.6 furnish county level data.

Table 3.1 shows that 37,522 housing units were authorized by building permits during 1999, an increase of about 36% from 1996. Four out of ten permits were issued in the Central Region and one-third of the permits were issued in the North Region.

Table 3.1: 1999 Building Permits by Region

Region	Housing Units Authorized by Building Permits	
	Number	Percent
North	12,610	34%
Central	15,549	41%
South	9,363	25%
NEW JERSEY 1999	37,522	100%
1998	*35,676*	
1997	*30,017*	
1996	*27,577*	

Source: *The New Jersey Construction Report – Annual Report for 1999*

Table 3.2 presents statistics for COs. The number and location of new housing units in 1999 are different in the CO data. Only 28,109 COs were reported for 1999, 25% fewer COs than building permits. While 34% of the permits were issued for housing units in the North Region, only 25% of COs were issued in the North Region. The historical trend is also different. In 1999, building permits reached

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their highest level for the years reported. However, in 1997, 34,670 COs were issued, 23% more COs than were issued in 1999.

Table 3.2: 1999 COs by Region

Region	Housing Units Certified	
	Number	Percent
North	6,973	25%
Central	13,236	47%
South	7,872	28%
NEW JERSEY (1999) *1998* *1997* *1996*	28,109 *28,008* *34,670* *22,239*	100%

Source: *The New Jersey Construction Report – Annual Report for 1999*

Table 3.3 shows that 24,865 homeowner warranties were issued during 1999. The distribution of homes by region is consistent with the distribution of COs in Table 3.2.

Table 3.3: 1999 Homeowner Warranties by Region

Region	Homeowner Warranties	
	Number	Percent
North	5,905	24%
Central	12,198	49%
South	6,762	27%
NEW JERSEY (1999)	24,865	100%

Source: Special tabulations from the Homeowner Warranty Registry

These warranty data suggest that the CO data furnish a more reliable estimate of residential new construction than the building permit data. According to the data reported in *The New Jersey Construction Report – Annual Report for 1999*, during 1999, 28,037 building permits, 24,395 COs, and 22,994 warranties were issued for one-family and two-family homes. The close match between the number of homes with a warranty (22,994) and the number of COs for one and two-family homes (24,395) for 1999 suggests that COs furnished a better estimate of the number of new homes sold during 1999 than permits. (Note: Most, but not all one and two-family homes require a warranty.)

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Table 3.4: 1999 Building Permits by Unit Type and County

County	All Units	1&2 Family Units	Multifamily Units	Mixed Use Units
Atlantic County	1,733	1,415	285	33
Bergen County	1,818	1,263	549	6
Burlington County	2,995	2,945	10	40
Camden County	1,040	830	206	4
Cape May County	1,405	1,361	27	17
Cumberland County	375	369	1	5
Essex County	1,590	1,345	241	4
Gloucester County	1,667	1,479	158	30
Hudson County	3,640	423	3,212	5
Hunterdon County	753	738	13	2
Mercer County	1,241	1,147	85	9
Middlesex County	3,249	2,740	496	13
Monmouth County	3,728	2,864	621	243
Morris County	2,260	1,475	688	97
Ocean County	4,315	3,916	322	77
Passaic County	872	538	272	62
Salem County	148	136	10	2
Somerset County	2,263	1,756	498	9
Sussex County	792	611	165	16
Union County	696	558	88	50
Warren County	942	866	67	9
State Buildings[2]	14	13	0	1
State Totals	37,536	28,788	8,014	734

[1] SOURCE: The New Jersey Construction Reporter Annual Report 1999 Table 1c.
[2] Buildings owned by the State including State offices, colleges, hospital, and prisons.

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Table 3.5: 1999 COs by Unit Type and County

County	All Units	1&2 Family Units	Multifamily Units	Mixed Use Units
Atlantic County	1,103	926	46	131
Bergen County	1,178	913	250	15
Burlington County	2,660	2,514	82	64
Camden County	1,258	1,125	125	8
Cape May County	1,203	1,130	51	22
Cumberland County	292	288	0	4
Essex County	1,398	1,144	253	1
Gloucester County	1,236	1,131	88	17
Hudson County	648	314	327	7
Hunterdon County	721	707	13	1
Mercer County	1,182	1,102	75	5
Middlesex County	2,671	2,122	537	12
Monmouth County	2,599	2,434	32	133
Morris County	1,614	1,312	292	10
Ocean County	3,995	3,397	539	59
Passaic County	481	324	152	5
Salem County	120	117	1	2
Somerset County	2,068	1,802	265	1
Sussex County	575	534	25	16
Union County	267	265	0	2
Warren County	812	790	16	6
State Buildings[2]	28	4	24	0
State Totals	28,109	24,395	3,193	521

[1] SOURCE: The New Jersey Construction Reporter Annual Report 1999 Table 2a.
[2] Buildings owned by the State including State offices, colleges, hospital, and prisons.

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Table 3.6: 1999 Homeowner Warranties by County

County	Number of Warranties
Atlantic County	1,039
Bergen County	1,035
Burlington County	2,389
Camden County	684
Cape May County	1,022
Cumberland County	209
Essex County	934
Gloucester County	1,333
Hudson County	497
Hunterdon County	704
Mercer County	1,097
Middlesex County	2,114
Monmouth County	2,544
Morris County	1,359
Ocean County	3,598
Passaic County	407
Salem County	79
Somerset County	1,799
Sussex County	510
Union County	393
Warren County	733
State Totals	24,479

[1] SOURCE: The New Jersey Construction Reporter Annual Report 1999 Table 14a.

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C. Baseline Estimates of RNC Program Market Share

Three utility residential new construction programs were in place prior to fielding this study. PSE&G and Conectiv Power Delivery have ENERGY STAR labeled programs that offer substantial financial and marketing incentives to participating builders. GPU Energy has been offering the GoodCents certification program for homes with electric heat since 1986.

Table 3.7 shows the 1999 statistics for the existing utility RNC programs. Two statistics are presented. "Certified Homes" includes only those housing units that have been completed and certified as meeting program requirements. "Homes in Contract" includes homes that were committed to the program in 1999, whether or not they were actually constructed.

Table 3.7: 1999 Utility Residential New Construction Participation

Program	Certified Homes	Homes in Contract
Conectiv / ENERGY STAR	27	349
GPU Energy / GoodCents	62	80
PSE&G / EEH 5 Star	684	1,024
NEW JERSEY	746	1,453

Source: PSE&G, Conectiv Power Delivery, and GPU Energy

We can compute a baseline market share for the utility RNC programs by comparing the statistics in Table 3.7 to those presented previously in this section. One approach is to compute the baseline market share as Certified RNC Program homes divided by the total number of homes for which a CO was issued. Using this definition, the RNC market share for 1999 was 746 of 28,109, or 2.6% of the market. A second approach is to compute the market share as Contract RNC Program homes divided by the total number of residential building permits issued. Using this definition, the RNC market share for 1999 was 1,453 of 37,522, or 3.9% of the market. However, since we have determined that COs best represent the number of new homes sold and that certified homes best represent the number RNC program homes completed, we recommend that the Working Group use 2.6% as the RNC program baseline market share.

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D. Characteristics of New Housing Units

In this part of the report we present statistics that segment the new housing market by housing unit type, sales price, main heating fuel, and construction type. The ENERGY STAR program may need to be configured differently to address the needs of different market segments.

Table 3.8 shows the number of COs by region and housing unit type. As noted above, we present the CO data because it appears to represent the construction activity that actually occurred during a year more accurately. In 1999, about 20% of the new homes in the North Region were in multifamily[1] units or in mixed use buildings[2], while only 13% of homes in the Central Region and 8% of the homes in the South Region were categorized in that way. There do not appear to be any trends over time in terms of the type of housing units being constructed. For the years examined, the number of housing units in multifamily and mixed used buildings was in the range of 13% to 16% of the total number of housing units constructed. Building permit data show a very large increase in the number of multifamily units approved for construction. However, to date, there is no evidence from the data that are available that those units have actually been constructed.

Table 3.8: 1999 COs by Region and Unit Type

Region	Housing Unit Type	
	1&2 Family	Multifamily and Mixed Use
North	5,586	1,387
Central	11,578	1,686
South	7,231	641
NEW JERSEY (1999)	24,395	3,714
1998	23,593	4,415
1997	29,220	5,450
1996	18,797	3,442

Source: *The New Jersey Construction Report – Annual Report for 1999*

[1] A multifamily unit is defined as a building that consists of 3 or more housing units.
[2] A mixed-use building is defined as a building that includes both residential and non-residential units.

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The statistics in Table 3.8 include modular homes (i.e., homes that are manufactured partially off-site, but are assembled at the construction site), but do not include manufactured housing (HUD certified homes) since they are inspected by HUD and do not need local building inspector certification. According to the Industrialized Building Commission, for FY 2000 (July 199 to June 2000), 48 modular housing units were shipped to New Jersey.

Table 3.9 shows the distribution of new homes by sales price, for homes that had a Homeowner Warranty data. (Note: Most homes in the Homeowner Warranty Registry are one-family and two-family homes.)

Table 3.9: 1999 New Homes with a Homeowner Warranty by Price Category

Region	Price Category			
	Less than $150,000	$150,000 to $300,000	More than $300,000	Median Price
North	23%	39%	39%	$258,000
Central	16%	53%	31%	$236,531
South	34%	54%	12%	$175,485
NEW JERSEY	22%	50%	28%	$221,750

Source: Special tabulations from the Homeowner Warranty Registry

In New Jersey, about one-fourth of the warranted homes sold for less than $150,000, about half are priced in the $150,000 to $300,000 category, and about one-fourth are valued at more than $300,000. In the North Region, almost 40% of the homes are priced at more than $300,000, while only 30% of homes in the Central Region and 12% of the homes in the South Region are sold for over $300,000. The median sales price for 1999 was $221,750.

Table 3.10 furnishes information on the number of homes by price category by county. The median price varies from a low of $122,031 in Cumberland County to a high of $360,440 in Bergen County. In Cumberland County, three-fourths of the homes sell for less than $150,000. In Bergen County, two-thirds of the homes sell for over $300,000.

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Table 3.10: 1999 New Homes with a Homeowner Warranty by Price Category

Region	Price Category			
	Less than $150,000	$150,000 to $300,000	More than $300,000	Median Price
Atlantic County	52%	44%	4%	$148,042
Bergen County	11%	25%	64%	$360,440
Burlington County	22%	63%	15%	$199,000
Camden County	46%	44%	10%	$157,750
Cape May County	20%	51%	29%	$237,000
Cumberland County	75%	23%	2%	$122,031
Essex County	52%	21%	27%	$150,000
Gloucester County	39%	58%	3%	$163,179
Hudson County	31%	38%	31%	$255,000
Hunterdon County	7%	35%	58%	$339,750
Mercer County	18%	52%	29%	$227,904
Middlesex County	15%	62%	23%	$239,990
Monmouth County	10%	40%	50%	$302,000
Morris County	8%	39%	53%	$309,900
Ocean County	27%	68%	5%	$178,369
Passaic County	17%	39%	44%	$274,376
Salem County	41%	47%	12%	$156,780
Somerset County	6%	41%	53%	$310,083
Sussex County	12%	56%	32%	$254,275
Union County	49%	33%	18%	$155,000
Warren County	17%	72%	11%	$219,000
NEW JERSEY	22%	50%	28%	$221,750

Source: Special tabulations from the Homeowner Warranty Registry

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The Nonparticipating Homebuyer Survey also furnishes information for "homes built for sale." In that survey, we interviewed 200 homebuyers who purchased their homes during 1998, 1999, and 2000. The statistics derived from the Nonparticipating Homebuyer Survey furnish information about the population of houses built for sale in New Jersey. Table 3.11 summarizes these characteristics. (For some characteristics, the percentages add to less than 100% because the respondent didn't know or refused to answer.) Most new homes in New Jersey are gas heated production homes[3]. Almost one-third of them are larger than 2,500 square feet. About 5% of them were built as part of an affordable housing program. The sales price distribution demonstrates that the distribution for our sample of homebuyers is similar to the distribution in Table 3.9 from the Warranty Registry.

Table 3.11: Other New Home Characteristics

Characteristic	Category		
	Gas	**Electric**	**Other**
Main Heating Fuel	93%	3%	4%
	Production	**Custom**	
Production/Custom	88%	12%	
	Not Part of Affordable Housing Program	**Part of Affordable Housing Program**	
Affordable Housing	95%	5%	
	LT 1800	**1800-2500**	**More than 2500**
Square Footage	20%	27%	32%
	Less than $150,000	**$150,000-$300,00**	**$300,000 or More**
Sales Price	19%	55%	22%

E. Prefabricated Housing

In this part of the report we furnish information on prefabricated housing. There are two types of prefabricated housing; manufactured

[3] A custom home is defined as a home that is built to the homebuyer's specifications.

housing and modular housing. We define each type of prefabricated housing and furnish estimates of the number of prefabricated units.

1. Manufactured Housing

Manufactured housing is factory built and subject to HUD regulation. The regulations are part of the 1974 National Manufactured Home Construction and Safety Standards Act. Our source at the NJ Manufactured Housing Association (NJMHA) reports that "mobile" homes were replaced in 1976 by manufactured housing.

Before a manufactured unit leaves the factory it must have a HUD seal. It can be shipped anywhere in the US. In NJ outside dimensions must be at least 22' by 22'. This applies to single family detached residential only. On site, the dwelling is subject to only foundation inspection and how the unit is attached to the foundation. Inspectors do not inspect the dwelling since that was done at the factory. Inspectors check the smoke detectors and often check to be sure the lights work and the plumbing works, but they do not inspect the building details. The HUD standards are considered to be higher than the NJ BOCA standards. These homes can be two stories, although single story are the most common. They can come in pieces that need to be joined on site; however essentially they are completely prebuilt. They do not require a Certificate of Occupancy (CO).

According to the Manufactured Housing Institute (a national association), 644 manufactured housing units were shipped to New Jersey in 1999.

2. Modular or Industrialized Housing

According to the State of New Jersey, modular or industrialized housing is any building of closed construction, including, but not limited to, modular housing that is factory built single-family and multi-family housing (including closed wall panelized housing) and other modular nonresidential buildings. It "does not include any structure subject to the requirements of the National Manufactured Home Construction and Safety Standards Act of 1974." These homes are subject to standard inspections, require a CO, and are often less complete than manufactured homes. While

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the walls are up, they *usually* are not painted, *usually* do not have light fixtures, and *usually* do not have tile, carpet etc. Local inspectors inspect the structure and foundation. Along with the building design, electrical and plumbing designs must have local approval.

Modular homes must be registered with the New Jersey Homeowner Warranty Program. They also get a "seal". The seals are issued through the federal government (HUD contracts with an outside group). For New Jersey, Rhode Island and Michigan that group is the Industrialized Building Commission.

According to the Industrialized Building Commission, for fiscal 2000 (July 1999 - June 2000) 48 modular housing units were shipped to New Jersey. However, the Homeowner Warranty Registry lists 588 modular units. We have not been able to resolve this discrepancy.

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IV. Residential Additions and Alterations

The Working Group is interested in the number and economic value of additions and alterations done each year. The Division of Codes and Standards collects information on building permits for additions and alterations. Table 4.1 presents information on the number and value of additions and alterations by county for 1999.

Table 4.1: 1999 Additions and Alterations to Residential Structures

County	Permits for Additions	Permits for Alterations	Total Value ($ millions)
Atlantic County	405	5,930	$44.1
Bergen County	1,967	30,729	$271.4
Burlington County	726	9,543	$52.6
Camden County	663	11,283`	$67.3
Cape May County	612	5,300	$43.9
Cumberland County	223	3,003	$13.4
Essex County	628	14,904	$139.4
Gloucester County	503	5,262	$27.1
Hudson County	43	9,114	$140.6
Hunterdon County	314	3,989	$38.1
Mercer County	501	10,631	$75.6
Middlesex County	775	16,509	$91.1
Monmouth County	1,499	20,131	$165.1
Morris County	1,414	14,422	$133.2
Ocean County	1,458	15,045	$103.6
Passaic County	545	10,277	$66.6
Salem County	156	1,362	$8.8
Somerset County	431	9,603	$80.2
Sussex County	300	4,985	$28.2
Union County	648	13,435	$115.4
Warren County	183	3,366	$19.8
State Totals	**13,995**	**218,859**	**$1,747.2**

SOURCE: New Jersey Department of Community Affairs, Division of Codes and Standards

The total value of permits for additions and alterations is $1.7 billion, about half the size of the $3.6 billion residential new construction market. However, while the average dollar value of new construction is about $100,000 per unit, it is only $8,000 for additions and alterations.

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