



**Massachusetts Residential New
Construction Home Buyer Survey
*Final***

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Joint Management Committee

Submitted by:

NMR Group, Inc.

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Executive Summary

A telephone survey of recent buyers of newly constructed homes in Massachusetts was conducted from June through September of 2011 conducted for the Program Administrators (PAs) of the Massachusetts New Homes with ENERGY STAR[®] Program. Surveys were completed with 100 households who had bought ENERGY STAR certified homes and 118 households who had bought homes that did not participate in the program.

The survey's key findings, summarized in this Executive Summary, concern what buyers look for in a new home, awareness of ENERGY STAR homes, the role of ENERGY STAR certification in new home shopping, perceptions of ENERGY STAR homes, and reactions to recent changes in the program. The survey provides updates of similar studies conducted in 2002, 2003, 2004, and 2006.

When comparing the responses of households that bought ENERGY STAR homes with those of households that bought other homes, it is important to acknowledge key differences between the two groups within the sample. The respondents who bought ENERGY STAR homes are more likely to have bought spec homes than the respondents who bought other homes. This is likely due to two factors. The first factor is that the program does target large, spec home builders. The second factor is that respondents who bought other (non program) homes were identified through utility requests for new service. This method readily identifies home buyers with custom homes since the new service request is more likely to be in the homeowner's rather than the builder's name. The ENERGY STAR list of addresses provided by the program was cross-checked with customer information systems to provide contact information for all home buyers, both custom and spec.

The sample of ENERGY STAR Home respondents is less likely to be made up of detached, single family homes and more likely to be made up of townhouses or duplexes than the sample of respondents who bought other homes. Again, this is due in part to the fact that the program targets large, spec home builders who are more likely to build in developments with attached homes. It is also due in part to having more custom homes in the other homes sample, as discussed above; almost all (96%) of the respondents with custom homes have built detached, single family homes.

Factors in New Home Shopping

The importance of getting a more efficient home with lower energy bills has steadily risen for all buyers of new homes from 2002 to 2010, as shown in Figure 1. As in previous years, the most important factor in all buyers' decisions to buy or build their new home rather than any other home is the quality of construction (defined by the consumer); this factor has consistently ranked highest in every year the survey has been conducted—2010, 2006, 2004, 2003, and 2002. However, the mean ranking of getting a more efficient home with lower energy bills, using a

scale from 0 to 10 where 0 is one of the least important factors and 10 is one of the most important factors, has risen from 7.2 in 2002 to 9.0 in 2010.¹

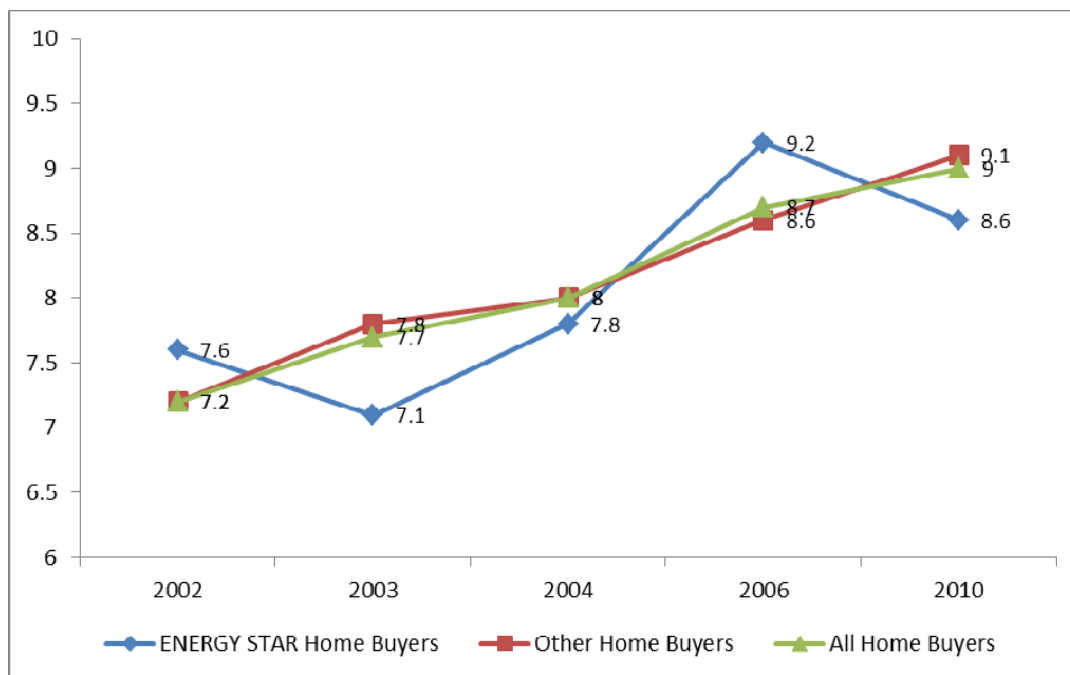


Figure 1 Mean Rating of Getting a More Efficient Home with Lower Energy Bills

Awareness of ENERGY STAR Homes

When analyzing awareness of ENERGY STAR homes and related issues, it is important to note that, for several years, the program has focused its resources on working with builders to convince them to participate in the program and provide support for them to make their homes more energy-efficient. The focus on builders means that there has not been any sustained effort to educate consumers about the advantages of ENERGY STAR homes; simply put, the PAs believe it is more cost-effective to boost supply rather than demand. Thus, the relatively low levels of home buyer awareness for some factors, which are often flat across the survey years, must be considered in light of the program’s operation.

Figure 2 summarizes changes in awareness of the ENERGY STAR label and program between 2002 and 2010.

- Almost all buyers of new homes (97%) are now aware of the ENERGY STAR designation in general; in contrast, two-thirds were aware of ENERGY STAR at the time of the first Massachusetts home buyer survey in 2002. Most of the increase in awareness occurred between 2006 and 2010.

¹ Results for the home buyer population as a whole are estimated by weighting the responses of buyers of new ENERGY STAR homes and buyers of other new homes by the percentage of ENERGY STAR homes in the population of newly constructed homes.

- Close to three out of five buyers of new homes are now aware of the ENERGY STAR label on new homes; this is more than twice the percentage who were aware at the time of the first Massachusetts home buyer survey in 2002. Again, most of the increase in awareness occurred between 2006 and 2010.
- Awareness of the Massachusetts New Homes with ENERGY STAR Program more than doubled from 13% to 27% of all buyers of new homes between 2006 and 2010.
- Awareness of the Home Energy Ratings System (HERS) among all buyers of new homes remained low in 2010.

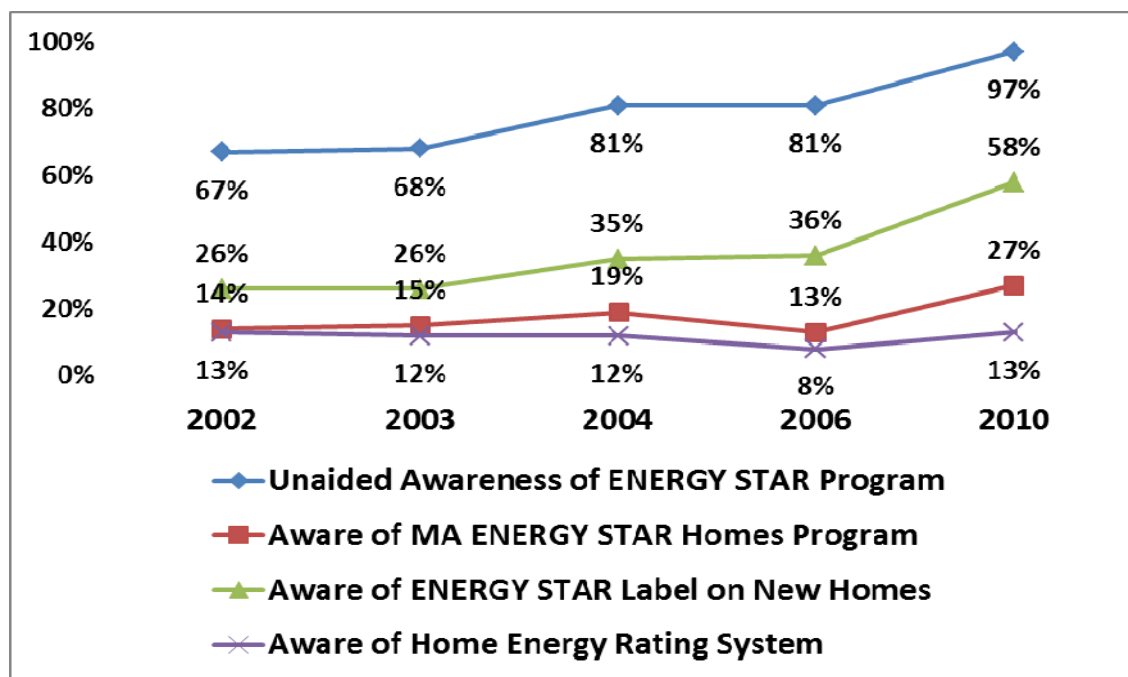


Figure 2 Changes in Awareness between 2002 and 2010—All Home Buyers

Building or Buying an ENERGY STAR Home

Home buyers in 2010, both those who bought ENERGY STAR homes and those who bought other homes, are significantly more likely to discuss the energy efficiency of the new home, how much it would cost to heat and cool the home, and green building while shopping for or building a new home than they were in 2006. The percentage discussing energy efficiency in 2010 is 60% up from 37%; heating and cooling costs is 53% up from 25%; and green building is 26% up from 9%.

Spec home buyers most commonly identify builders as a source of information about their new homes and the features or options to consider in 2010 as in 2006. However, the Internet is mentioned as a significant source of information on ENERGY STAR homes in 2010 (32% of spec home buyers who are aware of ENERGY STAR homes).

In 2010, as in previous years, a significant fraction of buyers of ENERGY STAR homes (more than two out of five) do not know they bought an ENERGY STAR home, and only a third (32% of all buyers of ENERGY STAR homes) know that their home has an ENERGY STAR label, the same proportion found in 2006.

Perceptions of ENERGY STAR Homes

Encouragingly, more than seven out of ten (72%) home buyers aware of ENERGY STAR homes believe they provide a little or a lot more value for the money, up from just over one-half (53%) in 2006. However, it should be noted that 2006 respondents were particularly skeptical of the value of ENERGY STAR homes and the 2010 numbers are nearly identical to 2004 levels (77%). Another encouraging finding is that significantly fewer respondents in 2010 (29%) agree or strongly agree with the statement that “all new homes are energy efficient” than in 2006 (41%) or 2004 (43%).

Program Satisfaction and Reaction to Changes

Overall satisfaction with the Massachusetts New Homes with ENERGY STAR Program has remained high with nearly three-quarters of buyers of new ENERGY STAR homes who know they have ENERGY STAR homes saying they are ‘satisfied’ or ‘extremely satisfied’.

Because of recent changes to the Massachusetts program, in which homes are certified into one of three tiers, but do not have to be ENERGY STAR certified, respondents who are aware of ENERGY STAR homes were asked to rate the importance of going through the Massachusetts program.² Three out of ten (30%) respondents say that going through the program would be very important if they were building or buying a new home today and an additional one-third (34%) believe program participation would be somewhat important.

Of the respondents who did not believe having a new home participate in the Massachusetts program was very important, over one-third (35%), including two out of five (40%) buyers of new ENERGY STAR homes, say that ENERGY STAR certification would make program participation more important.

Nearly two out of five respondents who are aware of ENERGY STAR homes (38%) believe that homes that go through the Massachusetts program are energy efficient even if they are not certified as ENERGY STAR; an additional two out of five (41%) believe that these are more energy efficient than homes that do not go through the program, but not as efficient as if they had gone through the ENERGY STAR certification process.

² The program changes were explained to respondents before asking them to rate the importance of going through the program.

1 Introduction

This document reports on findings of a survey of recent purchasers of newly constructed homes in Massachusetts, conducted for the Program Administrators (PAs) of the Massachusetts New Homes with ENERGY STAR[®] Program. Home buyers of both homes that were certified by the Program in 2010 (participants) and homes that did not participate in the Program (nonparticipants) were surveyed. The survey provides updates of similar studies conducted in 2002, 2003, 2004, and 2006. The objectives of the current survey are to assess:

- Awareness of ENERGY STAR homes—before or after entering the market
- Ability to describe what differentiates an ENERGY STAR home
- Awareness and understanding of the Home Energy Rating System (HERS), scoring, labeling, and ENERGY STAR Tiers
- What home buyers learned from builders, real estate agents, and other marketers about energy efficiency and ENERGY STAR homes
- Perceptions of added costs and added value of ENERGY STAR homes
- Importance of energy efficiency relative to other attributes sought by homebuyers
- Whether and how much homebuyers sought out or demanded ENERGY STAR homes
- Factor(s) most influential in deciding to purchase, or not to purchase, an ENERGY STAR home
- Perceptions and importance of green building
- Whether homebuyers believe their new homes provide Non-Energy Impacts (NEIs) such as thermal comfort and better indoor air quality and, if so, how much they value NEIs.
- Satisfaction with the program
- Changes in attitudes, perceptions, and experience in comparison with earlier years

A copy of the survey instrument is found in Appendix A.

This survey was conducted via computer-assisted telephone interviewing (CATI) from June 14 through September 8, 2011. The survey was spread out over nearly three months because it was also used to recruit nonparticipants for the Massachusetts New Homes Baseline Study; these respondents' homes needed to be verified through local building departments as built under IECC 2009, which meant that the names of eligible customers were provided to the interviewers in increments as they became available. The samples of home buyers came from lists of new service requests in 2010 provided by the PAs. To identify which new service requests were for ENERGY STAR homes, the addresses of ENERGY STAR individual homes and developments were cross-referenced with the new service request lists as well as the PAs' Customer Information Systems. There could be some ENERGY STAR homes in the nonparticipant sample that obtained certification independent of the Program. The interviewers confirmed that each house is newly constructed, and that the respondent is one of the buyers. Hence the sample represents only owner-occupied new homes, not newly constructed homes that are for rent.

Sample sizes and sampling error (assuming a 50%/50% break at the 90% confidence level) are shown in Table 1-1.

Table 1-1 Sample Sizes and Sampling Error

	Sample Size	Sampling Error (90%confidence)
ENERGY STAR homes 2010	100	±8.1%
Other homes 2010	118	±7.5%
Total 2010	218	±5.9%
ENERGY STAR homes compared to other homes 2010		±11.1%
ENERGY STAR homes 2010 compared to 2002, 2003, 2004, or 2006		±11.4-12.2%
Other homes 2010 compared to 2002, 2003, 2004, or 2006		±10.5-11.2%
Total 2010 compared to 2002, 2003, 2004, or 2006		±8.8-9.5%

2002 Sample Sizes: ENERGY STAR homes (100); Other homes (129); Total (229)

2003 Sample Sizes: ENERGY STAR homes (100); Other homes (100); Total (200)

2004 Sample Sizes: ENERGY STAR homes (80); Other homes (100); Total (180)

2006 Sample Sizes: ENERGY STAR homes (100); Other homes (100); Total (200)

2010 Sample Sizes: ENERGY STAR homes (100); Other homes (118); Total (218)

2 Characteristics of New Home Buyers

As in previous years, the respondents who bought ENERGY STAR homes are more likely to have bought spec homes (70%) than the respondents who bought other homes (41%). (Table 2-1) This is likely due to two factors. The first factor is that the program does target large, spec home builders. The second factor is that respondents who bought other (non program) homes were identified through utility requests for new service. This method readily identifies home buyers with custom homes since the new service request is more likely to be in the homeowner’s rather than the builder’s name. The ENERGY STAR list of addresses provided by the program was cross-checked with customer information systems to provide contact information for all home buyers, both custom and spec.

Table 2-1 Spec or Custom-Built

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Spec—Purchased a lot from a builder, selected one of several house plans offered by the builder, and selected from various available upgrade options.	10%	19%	16%
Spec—Purchased a home that was under construction and selected from various available upgrades.	13%	8%	10%
Spec—Purchased a finished home	47%	14%	24%
Custom—Purchased land and worked with an architect and/or builder to design and build the home.	13%	36%	29%
Custom—Had a house plan and a lot and hired a contractor/builder to build the home or built home myself.	4%	8%	7%
Custom—I/we am/are the owner(s) and builder(s)	6%	10%	9%
Other/Don’t know	7%	4%	5%

Table 2-1 Spec or Custom-Built (continued)
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2006			
n	100	100	200
Spec—Purchased a lot from a builder, selected one of several house plans offered by the builder, and selected from various available upgrade options.	14%	7%	8%
Spec—Purchased a home that was under construction and selected from various available upgrades.	13%	8%	9%
Spec—Purchased a finished home	44%	28%	30%
Custom—Purchased land and worked with an architect and/or builder to design and build the home.	15%	30%	28%
Custom—Had a house plan and a lot and hired a contractor/builder to build the home or built home myself.	12%	27%	25%
Other/Don't know	2%	0%	0%
2004			
n	80	100	180
Spec	85%	45%	49%
Custom	13%	49%	45%
Other/Don't know	2%	6%	6%
2003			
n	100	100	200
Spec	78%	38%	42%
Custom	15%	56%	52%
Other/Don't know	7%	6%	6%
2002			
n	100	129	229
Spec	80%	49%	51%
Custom	18%	47%	45%
Other/Don't know	3%	4%	3%

The sample of ENERGY STAR Home respondents is less likely to be made up of detached, single family homes and more likely to be made up of townhouses or duplexes than the sample of respondents who bought other homes. Again, this is due in part to the fact that the program targets large, spec home builders who are more likely to build in developments with attached homes. It is also due in part to having more custom homes in the other homes sample, as discussed above; almost all (96%) of the respondents with custom homes have built detached, single family homes. There are also far fewer ENERGY STAR homes in multifamily buildings than in previous years since larger buildings are no longer eligible for the program. (Table 2-2)

Table 2-2 Type of Home

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Single family detached home	58%	94%	83%
Townhouse or duplex	38%	6%	16%
Two-, three-, or four family home	1%	0%	0%
Part of a building with 5+ units	3%	0%	1%
2006			
n	100	100	200
Single family detached home	41%	72%	69%
Townhouse or duplex	37%	12%	15%
Two-, three-, or four family home	4%	3%	3%
Part of a building with 5+ units	18%	13%	13%
2004			
n	80	100	180
Single family detached home	42%	76%	72%
Townhouse or duplex	48%	10%	14%
Two-, three-, or four family home	6%	2%	2%
Part of a building with 5+ units	4%	11%	11%
Other	0%	1%	1%

Table 2-2 Type of Home (continued)

(all home buyers)

2003			
n	100	100	200
Single family detached home	69%	87%	85%
Two-, three-, or four family home	10%	2%	3%
Townhouse or duplex	9%	2%	3%
Part of a building with 5+ units	6%	7%	7%
Other	6%	2%	2%
2002			
n	100	129	229
Single family detached home	71%	85%	84%
Two-, three-, or four family home	2%	2%	1%
Townhouse or duplex	11%	6%	7%
Part of a building with 4+ units	10%	5%	5%
Other	6%	2%	3%

The U.S. Census only publishes data for the number of single family detached and single family attached homes completed by region rather than by state. In 2010, approximately 44,000 single family detached and 10,000 single family attached homes were completed in the Northeast; single family detached homes were thus about 81% of all single family homes completed.³ As will be further discussed in Chapter 4, awareness of ENERGY STAR homes does not significantly vary by the type of home purchased.

³ U.S. Census Bureau, New Residential Construction, Quarterly Starts and Completions by Purpose and Design, <http://www.census.gov/const/www/newresconstindex.html>

Not surprisingly, given the larger number of duplexes and townhouses, buyers of new ENERGY STAR homes say their homes are smaller than do buyers of other homes. (Table 2-3)

Table 2-3 Square Footage of Home
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Less than 1500	11%	8%	9%
1500-1999	22%	24%	23%
2000-2499	27%	20%	22%
2500-2999	8%	25%	20%
3000-3999	12%	11%	11%
4000-4999	6%	4%	5%
5000 or more	1%	3%	2%
(Don't know/refused)	13%	6%	8%
2006			
n	100	100	200
Less than 1500	14%	20%	20%
1500-1999	28%	21%	22%
2000-2499	26%	22%	23%
2500-2999	13%	3%	4%
3000-3999	9%	18%	17%
4000-4999	3%	7%	6%
5000 or more	1%	7%	6%
(Don't know/refused)	6%	2%	2%
2004			
n	80	100	180
Less than 1500	17%	12%	12%
1500-1999	28%	29%	29%
2000-2499	18%	24%	23%
2500-2999	16%	13%	13%
3000-3999	11%	15%	15%
4000-4999	6%	5%	5%
5000 or more	0%	2%	2%
(Don't know/refused)	4%	0%	1%

Table 2-3 Square Footage of Home (continued)
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2003			
n	100	100	200
Less than 1500	11%	10%	10%
1500-1999	21%	16%	17%
2000-2499	17%	18%	18%
2500-2999	15%	14%	14%
3000-3999	22%	21%	21%
4000-4999	6%	5%	5%
5000 or more	3%	9%	8%
(Don't know/refused)	5%	7%	7%
2002			
n	100	129	229
Less than 1500	12%	11%	11%
1500-1999	14%	20%	20%
2000-2499	24%	16%	17%
2500-2999	12%	22%	21%
3000-3999	12%	16%	15%
4000-4999	10%	5%	5%
5000 or more	8%	8%	8%
(Don't know/refused)	8%	2%	3%

As in previous years, the buyers of newly constructed homes interviewed for the 2010 survey are likely to have already owned a home before buying the home in question. Unlike previous years, however, buyers of new ENERGY STAR homes in 2010 are more likely than buyers of other homes to be first-time buyers. (Table 2-4)

Table 2-4 First-Time Home Buyer or Already Owned a Home

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
First-time home buyer	35%	18%	23%
Already owned home	61%	81%	75%
(Refused)	4%	2%	3%
2006			
n	100	100	200
First-time home buyer	20%	28%	27%
Already owned home	78%	69%	70%
(Refused)	2%	3%	3%
2004			
n	80	100	180
First-time home buyer	19%	28%	27%
Already owned home	77%	71%	72%
(Refused)	4%	1%	1%
2003			
n	100	100	200
First-time home buyer	21%	26%	26%
Already owned home	76%	71%	72%
(Refused)	3%	3%	3%
2002			
n	100	129	229
First-time home buyer	27%	16%	17%
Already owned home	72%	81%	80%
(Refused)	1%	2%	2%

The vast majority of new homes have central air conditioning, up considerably from previous years. Unlike previous years, there does not appear to be any difference in the portions of ENERGY STAR and non ENERGY STAR homes that have central air conditioning. (Table 2-5)

Table 2-5 Presence of Central Air Conditioning

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Have Central Air Conditioning	86%	85%	85%
2006			
n	100	100	200
Have Central Air Conditioning	80%	71%	72%
2004			
n	80	100	180
Have Central Air Conditioning	73%	69%	69%
2003			
n	100	100	200
Have Central Air Conditioning	78%	70%	71%

Buyers of new ENERGY STAR homes in 2010 appear to be more likely to have attended graduate school (Table 2-6), which may be due to their tendency to be older than buyers of other new homes. (Table 2-7)

Table 2-6 Education

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Less than high school	0%	1%	1%
High school graduate	8%	9%	9%
Technical or trade school graduate	3%	0%	1%
Some college	8%	12%	11%
College graduate	26%	39%	35%
Some graduate school	9%	3%	5%
Graduate degree	40%	31%	34%
(Refused)	6%	4%	5%

Table 2-6 Education (continued)

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2006			
n	100	100	200
Less than high school	0%	2%	2%
High school graduate	17%	17%	17%
Technical or trade school graduate	3%	1%	1%
Some college	8%	14%	13%
College graduate	33%	30%	30%
Some graduate school	6%	5%	5%
Graduate degree	23%	27%	27%
(Refused)	10%	4%	5%
2004			
n	80	100	180
Less than high school	2%	3%	3%
High school graduate	5%	21%	20%
Technical or trade school graduate	3%	6%	5%
Some college	15%	7%	8%
College graduate	45%	44%	44%
Some graduate school	4%	4%	4%
Graduate degree	22%	15%	15%
(Refused)	4%	0%	1%
2003			
n	100	100	200
Less than high school	3%	2%	2%
High school graduate	15%	19%	18%
Technical or trade school graduate	1%	2%	2%
Some college	17%	15%	15%
College graduate	29%	31%	31%
Some graduate school	7%	4%	4%
Graduate degree	25%	22%	22%
(Refused)	3%	5%	5%
2002			
n	100	129	229
Less than high school	1%	1%	1%
High school graduate	13%	20%	19%
Technical or trade school graduate	3%	2%	2%
Some college	19%	14%	14%
College graduate	32%	35%	35%
Some graduate school	5%	9%	8%
Graduate degree	19%	17%	17%
(Refused)	8%	3%	3%

Table 2-7 Age
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
18 to 24	1%	1%	1%
25 to 34	16%	22%	20%
35 to 44	22%	30%	27%
45 to 54	24%	19%	21%
55 to 64	16%	13%	14%
65 or over	13%	9%	10%
(Refused)	8%	8%	8%
2006			
n	100	100	200
18 to 24	4%	1%	2%
25 to 34	11%	22%	20%
35 to 44	15%	20%	19%
45 to 54	18%	28%	27%
55 to 64	21%	15%	16%
65 or over	21%	9%	10%
(Refused)	10%	5%	6%
2004			
n	80	100	180
18 to 24	0%	3%	3%
25 to 34	9%	26%	24%
35 to 44	26%	25%	25%
45 to 54	21%	19%	19%
55 to 64	20%	11%	12%
65 or over	19%	13%	13%
(Refused)	5%	3%	4%
2003			
n	100	100	200
18 to 24	4%	3%	3%
25 to 34	17%	19%	19%
35 to 44	26%	34%	33%
45 to 54	21%	25%	25%
55 to 64	13%	8%	9%
65 or over	12%	2%	3%
(Refused)	7%	9%	9%

Table 2-7 Age (continued)
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2002			
n	100	129	229
18 to 24	0%	0%	0%
25 to 34	10%	19%	18%
35 to 44	25%	21%	21%
45 to 54	19%	25%	24%
55 to 64	25%	16%	17%
65 or over	11%	14%	14%
(Refused)	10%	5%	6%

The buyers of new ENERGY STAR homes surveyed are still more likely to live in an over-55 community in 2010, but the difference with buyers of other new homes is not as great as in previous years. (Table 2-8)

Table 2-8 Home in an Over-55 Community
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Yes	27%	20%	22%
No	62%	66%	65%
Don't know	11%	14%	13%
2006			
n	100	100	200
Yes	22%	8%	9%
No	75%	88%	87%
Don't know	3%	4%	4%
2004			
n	80	100	180
Yes	26%	15%	16%
No	66%	85%	82%
Don't know	8%	0%	2%

As in previous years, buyers of new ENERGY STAR homes have smaller households in 2010 than buyers of other homes; this makes sense since these buyers are older and there are more townhouses and duplexes among the buyers of ENERGY STAR homes surveyed. (Table 2-9)

Table 2-9 Number of People in Household Most of Year
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
One	5%	4%	4%
Two	51%	41%	44%
Three	17%	14%	15%
Four	20%	23%	22%
Five	2%	6%	5%
Six or more	1%	4%	3%
None, it's seasonally occupied	0%	2%	1%
Mean	2.9	3.4	3.3
2006			
n	100	100	200
One	18%	15%	16%
Two	46%	34%	35%
Three	14%	22%	20%
Four	14%	15%	15%
Five	6%	10%	10%
Six or more	2%	3%	3%
None, it's seasonally occupied	0%	1%	1%
Mean	2.5	2.9	2.8
2004			
n	80	100	180
One	17%	8%	9%
Two	39%	38%	38%
Three	17%	14%	14%
Four	17%	25%	24%
Five	7%	11%	11%
Six or more	3%	2%	2%
None, it's seasonally occupied	0%	2%	2%
Mean	2.6	3.1	3.0

Table 2-9 Number of People in Household Most of Year (continued)
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2003			
n	100	100	200
One	11%	16%	15%
Two	33%	29%	29%
Three	14%	14%	14%
Four	27%	22%	22%
Five	9%	10%	10%
Six or more	3%	4%	4%
(Don't know/refused)	3%	5%	5%
Mean	3.1	3.2	3.2
2002			
n	100	129	229
One	7%	12%	12%
Two	44%	35%	36%
Three	14%	13%	13%
Four	15%	21%	21%
Five	11%	12%	12%
Six or more	2%	2%	2%
(Don't know/refused)	7%	4%	4%
Mean	2.8	2.9	2.9

Most new home buyers expect to stay in their homes for a long time with about two thirds expecting to stay more than ten years or indefinitely. (Table 2-10)

Table 2-10 Expected Stay in New Home

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
One year or less	0%	0%	0%
Two to three years	5%	2%	3%
Four to five years	8%	2%	4%
Six to ten years	9%	14%	12%
More than ten years	26%	17%	20%
Indefinitely/rest of life	41%	49%	46%
Don't know	11%	16%	14%
2006			
n	100	100	200
One year or less	0%	4%	4%
Two to three years	2%	8%	7%
Four to five years	9%	9%	9%
Six to ten years	15%	13%	13%
More than ten years	15%	27%	26%
Indefinitely/rest of life	49%	31%	33%
Don't know	10%	8%	8%
2004			
n	80	100	180
One year or less	5%	1%	2%
Two to three years	5%	6%	6%
Four to five years	9%	16%	15%
Six to ten years	6%	11%	11%
More than ten years	24%	20%	20%
Indefinitely/rest of life	37%	42%	42%
Don't know	14%	4%	4%

Finally, it appears in 2010, as in previous years, that buyers of new ENERGY STAR homes have slightly lower household incomes than buyers of other homes; this is probably related to the fact that the latter are less likely to be 65 years or older and more likely to have bought single, detached homes. (Table 2-11)

Table 2-11 Income

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Less than \$35,000	5%	1%	2%
\$35,000 to \$49,999	6%	5%	5%
\$50,000 to \$74,999	10%	9%	9%
\$75,000 to \$99,999	11%	9%	10%
\$100,000 to \$149,999	21%	24%	23%
\$150,000 or more	20%	15%	17%
(Refused)	27%	37%	34%
2006			
n	100	100	200
Less than \$35,000	1%	6%	5%
\$35,000 to \$49,999	6%	10%	10%
\$50,000 to \$74,999	22%	13%	14%
\$75,000 to \$99,999	11%	13%	13%
\$100,000 to \$149,999	12%	9%	9%
\$150,000 or more	12%	18%	17%
(Refused)	36%	31%	32%
2004			
n	80	100	180
Less than \$35,000	4%	7%	7%
\$35,000 to \$49,999	6%	12%	11%
\$50,000 to \$74,999	17%	16%	16%
\$75,000 to \$99,999	8%	19%	18%
\$100,000 or more	44%	31%	32%
(Refused)	21%	15%	16%
2003			
n	100	100	200
Less than \$35,000	4%	2%	2%
\$35,000 to \$49,999	7%	2%	2%
\$50,000 to \$74,999	18%	15%	15%
\$75,000 to \$99,999	13%	12%	12%
\$100,000 or more	20%	28%	27%
(Refused)	38%	41%	41%

Table 2-11 Income (continued)

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2002			
n	100	129	229
Less than \$35,000	6%	3%	3%
\$35,000 to \$49,999	5%	5%	5%
\$50,000 to \$74,999	12%	12%	11%
\$75,000 to \$99,999	16%	11%	11%
\$100,000 or more	19%	29%	29%
(Refused)	42%	40%	41%

3 What Home Buyers Seek and How They Shop for a New Home

All survey respondents, regardless of their knowledge of ENERGY STAR homes, answered questions about what factors are most important to them in deciding to buy or build their home as well as the new home shopping process and sources of information.

3.1 What Home Buyers Look for in a New Home

The most important factor in all new home buyers' decisions to buy or build their home rather than any other is the quality of construction (defined by the consumer), as shown in Table 3-1; this factor has consistently ranked highest in every year the survey has been conducted—2010, 2006, 2004, 2003, and 2002. However, the overall mean rating for getting a more efficient home with lower energy bills has steadily risen for new home buyers in the five years surveys have been conducted. In 2002, this reason was ranked 7.2 on a scale of 0 to 10; in 2003, it rose to 7.7; then to 8.0 in 2004; to 8.7 in 2006; and in 2010 it rose again to 9.0. Moreover, there is not much variation in the mean rating for this factor among different demographic and economic groups in 2010, though respondents with higher incomes (over \$150,000 a year) give it a slightly lower rating (8.5 versus 9.0 for all home buyers) and respondents between the ages of 45 and 64 give it the highest ratings. Clearly, new home buyers have been reacting to higher energy prices and, possibly, increased publicity about global warming and other environmental concerns to place a high value on energy efficiency.

Energy efficiency measures such as more efficient windows and a more efficient furnace or boiler also get high rankings in 2010 as did better insulation and more efficient windows in 2006. Other important reasons for choosing one new home over another in 2010 include its location, being involved in decisions about features of the home, room layout or design, and builder reputation. Interestingly, having a new home certified as an ENERGY STAR home had a lower mean ranking in 2010 (7.2 for all home buyers) than in 2006 (7.9 for all home buyers).

The mean rankings were analyzed by whether the respondents who bought ENERGY STAR homes knew that they had done so; for respondents who bought other homes, the rankings were analyzed by whether they were aware that new homes could be certified as ENERGY STAR. (Awareness of ENERGY STAR homes is explored in Chapter 4.) There are few significant differences. Among respondents who bought other homes, those who are aware of ENERGY STAR homes give a significantly higher ranking to having a home certified as ENERGY STAR (7.5 vs. 6.1) and to having more or better insulation (8.8 vs. 8.1)

Table 3-1 Factors in Decision to Buy/Build This Home Rather than Another

(all home buyers;
0= “one of the least important factors,” 10= “one of the most important factors”)

	ENERGY STAR Homes		Other Homes		Total	
2010						
	n	Mean	n	Mean	n	Total
Quality of construction	98	9.4	117	9.4	215	9.4
Good location	100	9.2	115	9.1	215	9.1
Being involved in decisions about features of the home	92	8.2	111	9.3	203	9.0
Getting a more efficient home with lower energy bills	100	8.6	117	9.1	217	9.0
Room layout or design	98	8.7	115	9.1	213	9.0
Builder reputation	90	8.9	110	9.0	200	9.0
More efficient windows or windows with a low e value	99	8.8	116	9.0	215	8.9
Having a kitchen with upgraded cabinets and countertops and high end appliances	98	8.8	115	8.8	213	8.8
A more efficient furnace or boiler	93	8.5	114	8.8	207	8.7
Good exterior finish details— wood siding, exterior trim, no gaps in joints	98	8.6	114	8.8	212	8.7
Better comfort/fewer drafts	98	8.5	114	8.7	212	8.6
Better sealing of air leaks	91	8.3	110	8.7	201	8.6
Good interior finish details – no gaps in joints, ceiling medallions, wainscoting, chair rails	98	8.7	115	8.6	213	8.6
More efficient appliances	97	8.4	117	8.6	214	8.5
More or better insulation	94	8.1	111	8.5	205	8.4
Healthier indoor air	99	8.5	117	8.3	216	8.4
Size of the home	98	8.3	113	8.3	211	8.3
Keeping down the overall purchase price of the home	96	8.3	113	8.3	209	8.3
Good-sized lot	88	7.1	112	7.6	200	7.5
Community amenities (e.g., bike trails, community pool, recreation center, access to public transportation)	94	7.2	110	7.4	204	7.3
Commuting distance or time to work	87	7.4	104	7.2	191	7.3

Table 3-1 Factors in Decision to Buy/Build This Home Rather than Another (continued)

(all home buyers;
0= "one of the least important factors," 10= "one of the most important factors")

	ENERGY STAR Homes		Other Homes		Total	
2010						
	n	Mean	n		n	Mean
Certified as an ENERGY STAR home	92	8.0	106	6.9	198	7.2
Good schools	73	5.6	98	6.9	171	6.6
Number of bathrooms and/or bathrooms with nice features such as whirlpool baths	95	6.8	112	6.5	207	6.6
Use of renewable energy and other green building measures	91	7.4	111	6.3	202	6.6
Lack of availability of other suitable homes	84	5.2	102	5.0	186	5.1
2006						
	n	Mean	n	Mean	n	Total
Quality of construction	98	9.1	95	8.7	193	8.8
Getting a more efficient home with lower energy bills	93	9.2	92	8.6	185	8.7
A higher level of efficiency for the house as a whole	96	8.9	94	8.6	190	8.7
More or better insulation	93	8.6	90	8.7	183	8.7
Being involved in decisions about features of the home	88	8.6	88	8.6	176	8.6
More efficient windows or windows with a low e value	94	8.8	93	8.6	187	8.6
Better comfort/fewer drafts	89	8.7	95	8.6	184	8.6
Room layout or design	96	8.7	91	8.5	173	8.5
Better sealing of air leaks	95	8.6	89	8.4	184	8.5
A more efficient furnace or boiler	94	8.7	93	8.3	187	8.3
Good interior finish details – no gaps in joints, ceiling medallions, wainscoting, chair rails	99	8.3	91	8.3	190	8.3
Good exterior finish details— wood siding, exterior trim, no gaps in joints	93	8.4	92	8.3	185	8.3
More efficient appliances	97	8.5	91	8.2	188	8.3
Healthier indoor air	93	8.4	89	8.2	182	8.2
Builder reputation	86	8.6	87	8.1	173	8.2
Size of the home	96	8.4	93	8.0	189	8.1

Table 3-1 Factors in Decision to Buy/Build This Home Rather than Another (continued)

(all home buyers;
0= “one of the least important factors,” 10= “one of the most important factors”)

2006						
	n	Mean	n	Mean	n	Total
Keeping down the overall purchase price of the home	97	8.1	95	8.0	192	8.0
Certified as an ENERGY STAR home	92	8.8	69	7.7	161	7.9
Larger framing materials, such as 2x6 framing, which also allows for more insulation	86	8.1	77	7.7	163	7.8
Community amenities (e.g., bike trails, community pool, recreation center, access to public transportation)						7.5
Good schools	78	3.6	97	5.2	175	7.0
Commuting distance or time to work	47	6.8	69	7.0	116	7.0
Use of green building	52	7.7	45	6.3	97	6.5
Lack of availability of other suitable homes	67	5.3	71	6.0	138	5.9
2004						
	n	Mean	n	Mean	n	Total
Quality of construction	80	8.9	100	9.1	180	9.1
Room layout or design	80	8.4	100	8.4	180	8.4
Being involved in decisions about features of the home	78	7.6	98	8.1	176	8.1
Getting a more efficient home with lower energy bills	77	7.8	99	8.0	176	8.0
Keeping down overall purchase price	79	7.5	98	8.1	177	8.0
Builder reputation	75	8.4	98	8.0	173	8.0
Size of the home	80	7.7	100	7.9	180	7.9
Landscaping or yard	79	6.5	99	6.1	178	6.2
Community amenities (e.g., bike trails, community pool, recreation center, access to public transportation)	79	6.1	98	5.4	177	5.5
Commuting distance or time to work	78	5.3	97	5.2	175	5.2
Schools	78	3.6	97	5.2	175	5.1
Lack of availability of other suitable homes	77	4.8	94	4.8	171	4.8

Table 3-1 Factors in Decision to Buy/Build This Home Rather than Another (continued)

(all home buyers;
0= "one of the least important factors," 10= "one of the most important factors")

2003						
	n	Mean	n	Mean	n	Total
Quality of construction	100	8.6	98	9.1	198	9.0
Room layout or design	100	8.1	99	8.6	199	8.6
Being involved in decisions about features of the home	99	7.2	96	8.4	195	8.3
Keeping down overall purch. price	99	7.6	96	8.3	195	8.2
Size of the home	98	8.0	99	7.8	197	7.8
Getting a more efficient home with lower energy bills	98	7.1	99	7.8	197	7.7
Builder reputation	97	7.4	95	7.6	192	7.6
Landscaping or yard	98	6.7	94	6.6	192	6.6
Commuting distance or time to work	99	6.3	97	5.7	196	5.7
Community amenities (e.g., bike trails, community pool, recreation center, access to public transportation)	99	5.6	98	5.4	197	5.4
Lack of availability of other suitable homes	97	5.4	95	4.9	192	5.0
Schools	99	5.0	99	5.0	198	5.0
2002						
	n	Mean	n	Mean	n	Total
Quality of construction	100	8.4	129	8.8	229	8.8
Room layout or design	100	8.2	128	8.4	228	8.4
Builder reputation	100	7.0	123	8.3	223	8.2
Size of the home	100	7.8	129	8.1	229	8.0
Being involved in decisions about features of the home	99	7.9	127	8.0	226	8.0
Keeping down overall purchase price	98	7.4	127	7.3	225	7.3
Getting a more efficient home with lower energy bills	98	7.6	127	7.2	225	7.2
Landscaping or yard	99	5.9	129	6.5	228	6.4
Community amenities (e.g., bike trails, community pool, recreation center)	100	5.4	127	5.7	227	5.7
Schools	100	5.1	128	5.0	228	5.1
Commuting distance or time to work	99	5.9	125	4.7	224	4.8
Lack of availability of other suitable homes	99	4.0	120	4.6	219	4.6

While Table 3-1 presents reasons for buying or building a particular home that were read out loud to respondents, Table 3-2 shows other reasons they mention on their own. The most commonly mentioned reason in 2010 is the architectural style of the home, while the most commonly mentioned reasons in 2006 involved the home being in an attractive natural setting, often near conservation land, and affording good views. It should be noted that very few respondents, 27 in total, answered this question in 2010.

Table 3-2 Other Reasons Mentioned to Buy/Build This Home Rather than Another
(all home buyers; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Architectural style	1%	2%	2%
Waterfront location	0%	2%	1%
Affordability	1%	1%	1%
Near children	0%	1%	1%
Near parents	0%	1%	1%
Convenience of a modular home	0%	1%	1%
As an investment	0%	1%	1%
Handicap accessible	0%	1%	1%
Two-car garage	0%	1%	1%
Lower property taxes	0%	1%	1%
Central air	0%	1%	1%
First certified home in my town	0%	1%	1%
To be conscious of energy efficient technology	0%	1%	1%
A learning experience in building homes, and the lowered associated cost	0%	1%	1%
Combination of neighborhood, commute to the city, and public transportation	1%	0%	<1%
Cross-ventilation/cooling, low-flow toilets, rain-water capture	1%	0%	<1%
Financed by habitat for humanity	1%	0%	<1%
Available recreational facilities	1%	0%	<1%
Over 55 community	1%	0%	<1%
It is a new home	1%	0%	<1%
South-facing location	1%	0%	<1%
The year it was built	1%	0%	<1%
Bang for the buck	1%	0%	<1%

Table 3-2 Other Reasons Mentioned to Buy/Build This Home Rather than Another (continued)

(all home buyers; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2006			
n	100	100	200
Open space, near conservation land, view	4%	4%	4%
Attractive garden, terrace, backyard, landscaping	1%	4%	4%
Good price, affordable	2%	2%	2%
Near family	1%	2%	2%
Resale value	1%	2%	2%
Good location, not further specified	6%	1%	2%
Lot size	0%	2%	2%
Layout of the home	2%	1%	1%
Near city	1%	1%	1%
Available parking	1%	1%	1%
Indoor air quality	1%	1%	1%
Already owned land	0%	1%	1%
Wanted a newly constructed home	0%	1%	1%
Had control over the building process	2%	0%	0%
Over 55 community	2%	0%	0%
Won lottery for affordable housing	1%	0%	0%
Less maintenance needed	1%	0%	0%
Energy efficiency	1%	0%	0%

**Table 3-2 Other Reasons Mentioned to Buy/Build This Home Rather than Another
(continued)**

(all home buyers; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2004			
n	80	100	180
Ocean, woods, open space, view	13%	17%	17%
Family, neighbors	8%	8%	8%
Already owned land	0%	9%	8%
Affordable, good price	3%	9%	8%
Wanted to stay in the same area	8%	7%	7%
Neighborhood; community spirit	9%	5%	5%
Wanted new home	3%	5%	5%
Shopping; other community amenities	10%	3%	4%
Lot size	1%	4%	4%
Layout of the development	4%	3%	3%
Quiet; privacy	8%	2%	3%
Availability of parking	0%	2%	2%
Close to work	3%	2%	2%
Resale value	0%	2%	2%
Close to city	5%	2%	2%
Over 55 community	4%	1%	1%
Golf community	3%	0%	0%
No maintenance needed	3%	0%	0%
Energy efficiency	3%	0%	0%

**Table 3-2 Other Reasons Mentioned to Buy/Build This Home Rather than Another
(continued)**

(all home buyers; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2003			
n	100	100	200
Family, neighbors	9%	9%	9%
Ocean, woods, open space, view	4%	10%	8%
Neighborhood	9%	8%	8%
Close to major roads	6%	3%	4%
Already owned land	1%	4%	3%
Quiet	1%	5%	3%
Shopping	2%	2%	2%
Affordable, good price	0%	3%	2%
Churches, hospitals, golf course	1%	2%	2%
Lot size	0%	2%	1%
Wanted new home	0%	1%	1%
In large city	0%	1%	1%
Type, location of utilities	0%	2%	1%
Like the style	1%	1%	1%
Resale value	1%	1%	1%
Close to city	1%	0%	<1%
2002			
n	100	129	229
Ocean, woods, open space, view	5%	19%	18%
Family, neighbors	13%	8%	8%
Neighborhood	6%	7%	7%
Public transportation	4%	2%	2%
Shopping	5%	2%	2%
Lot size	0%	2%	2%
Already owned land	0%	2%	2%
Quiet	1%	1%	1%
Close to city	1%	1%	1%
Resale value	0%	2%	1%
Covered parking	0%	1%	1%
Pretty	0%	2%	1%
Taxes	1%	0%	<1%
Pets	1%	0%	<1%
Walking	0%	2%	1%
Universities	1%	0%	<1%

3.2 How Buyers Shop for a New Home

Buyers of new homes who purchased a finished home, a home under construction, or a lot from a builder who offered several house plans (spec home buyers) continue to get most of their information from builders in 2010 as in 2006. Not surprisingly, the Internet is mentioned as a significant source of information in 2010 (21% of all home buyers); in 2006, the survey instrument did not ask respondents if they had gotten their information from the Internet. Buyers of new ENERGY STAR homes are significantly more likely to get their information from real estate agents (37% vs. 24%) and the building company's marketing department (16% vs. 5%) and significantly less likely to mention the Internet as a source of their information (11% vs. 26%) than buyers of other new homes. (Table 3-3)

Table 3-3 How Spec Home Buyers Got Information about Their Home and Its Features

(spec home buyers; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	83	66	149
Builders	59%	61%	60%
Real estate agents	37%	24%*	28%
Internet	11%	26%*	21%
Building company's marketing department	16%	5%*	8%
Other	4%	3%	3%
General knowledge	1%	2%	2%
Advertising	1%	3%	2%
Lawyer/Architect	1%	2%	2%
Utility	0%	2%	1%
Don't know	10%	14%	13%
2006			
n	74	45	119
Builders	68%	49%*	52%
Building company's marketing department	54%	36%*	39%
Real estate agents	35%	36%	36%
Myself	1%	7%	6%
Home inspectors	0%	4%	4%
Advertising	0%	2%	2%
Friends and family	0%	2%	2%
Town/city government	1%	0%	<1%
Don't know	3%	24%	11%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Interestingly, respondents who knew they had bought ENERGY STAR homes are significantly more likely to get their information from the building company's marketing department than those who are unaware that they have bought an ENERGY STAR house. (25% vs. 5%)

Respondents who used the Internet are more likely to mention Masssave.com if they bought ENERGY STAR homes and Redfin.com and builder websites if they have bought other homes; however, only 26 respondents in total answered this question. (Table 3-4)

Table 3-4 Internet Sites Visited
(those who mentioned Internet usage; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	9	17	26
Masssave.com	2	1	3
Builder’s website	0	2	2
Redfin.com	0	2	2
Door manufacturers website	0	1	1
EnergyStar.gov	0	1	1
Epichomes.com	0	1	1
Mass. Government solar energy site	1	0	1
MLS	1	0	1
Ziprealty.com	0	1	1
Department of Energy	1	0	1
New homes with Energy Star site	0	1	1
Pingryhillhomes.com	1	0	1
Don’t remember	3	7	10

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Home buyers in 2010, both those who bought ENERGY STAR homes and those who bought other homes, are significantly more likely to discuss the energy efficiency of the new home, how much it would cost to heat and cool the home, and green building while shopping for or building a new home than they were in 2006. Buyers of ENERGY STAR new homes are significantly more likely to discuss energy efficiency (70% vs. 55%) and green building (40% vs. 20%) than those who bought other new homes. More than one-half of 2010 home buyers also say they discussed the energy efficiency of the heating and/or cooling equipment and the type of insulation used while shopping for or building a new home; these questions were not asked in the 2006 survey. (Table 3-5)

Not surprisingly, respondents who knew they bought ENERGY STAR homes are significantly more likely than those who did not know their new homes are ENERGY STAR to discuss the energy efficiency of the new home (78% vs. 60%); respondents who bought other homes and are aware of ENERGY STAR homes are also significantly more likely than those not aware of ENERGY STAR homes to discuss the energy efficiency of the new home (64% vs. 45%) as well as indoor air quality (45% vs. 28%) and green building (28% vs. 11%).

Table 3-5 Topics Discussed by Home Buyers While Shopping for, Designing, or Constructing a Home

(all home buyers; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Energy efficiency of heating and/or cooling equipment	69%	66%	67%
Type of insulation used	56%	68%*	64%
Energy efficiency of a new home	70% ^Ω	55%* ^Ω	60% ^Ω
How much it would cost to heat and cool the home	58% ^Ω	50% ^Ω	53% ^Ω
Indoor air quality	43%	37% ^Ω	39% ^Ω
Green building	40% ^Ω	20%* ^Ω	26% ^Ω
2006			
n	100	100	200
Energy efficiency of a new home	53%	35%*	37%
How much it would cost to heat and cool the home	44%	23%*	25%
Indoor air quality	42%	25%*	27%
Green building	18%	8%*	9%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

The vast majority of respondents report their questions were answered satisfactorily by builders and sales agents (Table 3-6); however a few respondents are unhappy, primarily because they feel they only received limited information from builders and sales agents. (Table 3-7)

Table 3-6 Whether Questions Were Answered Satisfactorily

(home buyers who discussed topics shown in Table 3.5)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	89	96	185
Yes	93% ^Ω	93%	93% ^Ω
No	7% ^Ω	7%	7%
Don't know	0%	0% ^Ω	0% ^Ω
2006			
n	61	41	102
Yes	100%	84%*	86%
No	0%	8%*	7%
Don't know	0%	8%*	7%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

Table 3-7 Why Not Satisfied with the Answers Received

(home buyers who were not satisfied with answers to questions about topics discussed as shown in Table 2.5; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	6	7	13
Bad relationship with builder	0	1	1
Learned more after buying the house than from what they said	1	0	1
I provided them with more information than they provided me	1	0	1
He [the person with whom had discussion; unsure of who it was] was terrible	0	1	1
I didn't ask a lot of questions	0	1	1
I am from Europe and had a lot of knowledge beforehand	1	0	1
I wish it was cheaper. The information didn't seem to make sense	0	1	1
Very limited information	1	0	1
Builder was OK until he received the money. He hasn't completed work	1	0	1
Incomplete answers	0	1	1
Told me what I wanted to hear and did something different	0	1	1
They told me it would be an Energy Star rated home, but it was rejected by the assessment company	0	1	1
Would rather not discuss	1	0	1
2006			
n	0	5	5
Builder didn't pay attention to energy efficiency	na	1	1
Builder did not know anything	na	1	1
Builder stole our money		1	1
Builder was very arrogant	na	1	1
At that time I thought they were satisfactory, but I found out that they are not satisfactory, because my home qualifies for an ENERGY STAR home	na	1	1

4 Awareness and Understanding of ENERGY STAR and Green Building

The Massachusetts home buyer survey has been tracking awareness of ENERGY STAR and ENERGY STAR homes since 2002. In 2006, the survey began tracking awareness of green building as well.

It is important to note here that, for several years, the program has focused its resources on working with builders to convince them to participate in the program and provide support for them to make their homes more energy-efficient. The focus on builders means that there has not been any sustained effort to educate consumers about the advantages of ENERGY STAR homes; simply put, the PAs believe it is more cost-effective to boost supply rather than demand. Thus, the relatively low levels of home buyer awareness for some factors, which are often flat across the survey years, must be considered in light of the program's operation.

4.1 Awareness and Understanding of ENERGY STAR

The percentage of new home buyers who express unaided awareness of the ENERGY STAR label—that is, those who say they have seen or heard of the label just by hearing the name—continues to rise. In 2010, almost all home buyers (97%) express unaided awareness—up significantly from 81% in 2006. (Table 4-1) As in 2006, buyers of new ENERGY STAR homes are less likely to have heard of the label than buyers of other homes. This counterintuitive finding is most likely due to the demographic differences between those who bought ENERGY STAR and those who bought other new homes. In the 2010 survey, the former are more likely to be over 65 years old and less likely to have incomes of \$75,000 or more. Both factors are correlated with decreased awareness of the ENERGY STAR label.

Table 4-1 Unaided Recognition of ENERGY STAR Label

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Recognize label	92% ^{Ω§†∇}	99%* ^{Ω§†∇}	97% ^{Ω§†∇}
2006			
n	100	100	200
Recognize label	71%	82%* ^{†∇}	81% ^{†∇}
2004			
n	80	100	180
Recognize label	81%	81% ^{†∇}	81% ^{†∇}
2003			
n	100	100	200
Recognize label	74%	67%	68%
2002			
n	100	129	229
Recognize label	77%	66%*	67%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

[∇]Significantly different from 2002 at the 90% confidence level.

Asked what the ENERGY STAR label means to them, four out of five of all home buyers are able to explain what it means (high understanding). This is significantly higher from 2006 levels. Respondents who had previously owned a home, have higher incomes (\$75,000 or more), and are under the age of 65 are more likely to have a high understanding of the label as compared with first-time home buyers, those with incomes less than \$75,000, and those older than 64. As might be expected, respondents who knew they bought ENERGY STAR homes are significantly more likely than those who did not know their new homes are ENERGY STAR to have a high understanding of the ENERGY STAR label (86% vs. 69%), mention saving money on heating costs (7% vs. 0%), and mention better insulation (5% vs. 0%). Respondents who bought other homes and are aware of ENERGY STAR homes are also significantly more likely than those not aware of ENERGY STAR homes to have a high understanding of the ENERGY STAR label (91% vs. 74%), mention energy efficiency or savings (44% vs. 25%), and mention better insulation (8% vs. 0%). (Table 4-2)

Table 4-2 Understanding of ENERGY STAR
(all home buyers; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
High understanding (not multiple response)	79% ^{Ω†√}	82% ^{Ω§†√}	81% ^{Ω§†√}
Energy efficiency/savings	44%	35%	38%
Efficient appliances, windows or lights	25%	30%	28%
Home/appliances meet a standard of energy efficiency	12%	14%	13%
Environmental benefit	13%	3%*	6%
Saving money on heating costs	4%	5%	5%
Rating of energy usage	1%	5%	4%
Better insulation	3%	4%	4%
Saving money on operation	6%	1%*	3%
Better air quality	0%	0%	0%
General understanding (not multiple response)	6% ^Ω	7%	7%
Savings (type not specified)	11%	15%	14%
Quality	3%	1%	2%
Rebates	2%	1%	1%
No understanding	15% ^{Ω†√}	11% ^{Ω§†√}	13% ^{Ω§†√}

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.
^ΩSignificantly different from 2006 at the 90% confidence level.
[§]Significantly different from 2004 at the 90% confidence level.
[†]Significantly different from 2003 at the 90% confidence level.
[√]Significantly different from 2002 at the 90% confidence level.

Table 4.2 Understanding of ENERGY STAR (continued)

(all home buyers; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2006			
n	100	100	200
High understanding (not multiple response)	67% [†]	71% ^{†v}	71% ^{†v}
Energy efficiency/savings	40%	48%	47%
Saving money on operation	12%	15%	15%
Efficient appliances, windows or lights	18%	13%	14%
Rating of energy usage	6%	4%	4%
Saving money on heating costs	4%	0%	1%
Environmental benefit	1%	1%	1%
Better insulation	1%	1%	1%
Better air quality	2%	0%	0%
General understanding (not multiple response)	1% ^{§†v}	5% [*]	4%
Rebates	0%	3%	3%
Quality	1%	2%	2%
Savings (type not specified)	0%	1%	1%
No understanding	32%	24% ^{†v}	25% ^{†v}
2004			
n	80	100	180
High understanding (not multiple response)	71% [†]	66% [†]	66% ^{†v}
Energy efficiency/savings	59%	51%	52%
Efficient appliances, windows or lights	12%	20%	19%
Saving money on operation	16%	9%	10%
Rating of energy usage	5%	5%	5%
Environmental benefit	3%	4%	4%
Saving money on heating costs	1%	2%	2%
Better insulation; fewer drafts	4%	1%	1%
General understanding (not multiple response)	6%	9% ^v	9% ^v
Quality	5%	3%	3%
Higher standards (no mention of efficiency)	3%	4%	4%
Savings (type not specified)	4%	4%	4%
Rebates	1%	2%	2%
Energy, no link to efficiency	0%	1%	1%
More expensive	0%	1%	1%
Higher home resale value	1%	0%	0%
No understanding	23% [†]	25% ^{†v}	25% ^{†v}

†Significantly different from 2003 at the 90% confidence level.

√Significantly different from 2002 at the 90% confidence level.

Table 4.2 Understanding of ENERGY STAR (continued)

(all home buyers; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2003			
n	100	100	200
High understanding (not multiple response)	49% [∇]	52%	52%
Energy efficiency/savings	46%	58%*	57%
Saving money on operation	23%	25%	25%
Energy conservation	3%	8%	7%
Environmental benefit	3%	2%	2%
Energy or environmental product standards	1%	0%	<1%
General understanding (not multiple response)	11%	5%	6%
Quality	7%	9%	9%
Energy, no link to efficiency	3%	2%	2%
Mentions specific products	3%	0%*	<1%
Most for my money	2%	0%	<1%
House at a certain level (not explained further)	1%	0%	<1%
Savings (type not specified)	0%	2%	1%
More expensive	1%	0%	<1%
No understanding	40% [∇]	43%	42%
2002			
n	100	129	229
High understanding (not multiple response)	61%	58%	58%
Energy efficiency/savings	43%	49%	48%
Energy conservation	2%	0%	<1%
Saving money on operation	17%	12%	13%
Environmental benefit	3%	0%*	<1%
Energy or environmental product standards	1%	5%*	5%
General understanding (not multiple response)	11%	3%*	4%
Energy, no link to efficiency	1%	0%	<1%
Mentions specific products	17%	16%	16%
Government backing	2%	2%	2%
Rebate	1%	2%	2%
No understanding	28%	39%*	38%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

*[∇]Significantly different from 2002 at the 90% confidence level.

Close to two out of three buyers of ENERGY STAR homes say they have seen or heard of the label on newly constructed homes as compared with just over one-half of the buyers of non-ENERGY STAR homes. (Table 4-3) This represents a marked and significant increase from 2006 levels for buyers of other homes and all home buyers. There remains in 2010 a significant difference in awareness of the ENERGY STAR label on newly constructed homes between buyers of ENERGY STAR homes and buyers of other homes, but the difference between the two groups is much lower than it was in 2006.

Table 4-3 Have Seen or Heard of ENERGY STAR Label on Newly Constructed Home
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Yes	66% [§]	54%* ^{Ω§†√}	58% ^{Ω§†√}
2006			
n	100	100	200
Yes	59% [§]	33%*	36% ^{†√}
2004			
n	80	100	180
Yes	41% ^{†√}	34% ^{†√}	35% ^{†√}
2003			
n	100	100	200
Yes	58%	23%*	26%
2002			
n	100	129	229
Yes	56%	23%*	26%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

[√]Significantly different from 2002 at the 90% confidence level.

There are no significant differences in awareness of ENERGY STAR homes between respondents who bought single, detached homes and those who bought attached homes such as townhouses or duplexes. This holds true for both buyers of ENERGY STAR homes and buyers of other homes. However, custom home buyers are significantly more likely to be aware of ENERGY STAR homes than respondents who bought spec homes. Among the respondents who bought ENERGY STAR homes, 83% of custom home buyers are aware that their home is ENERGY STAR certified compared to only 49% of spec home buyers. Among respondents who bought other homes, 63% of custom buyers are aware of ENERGY STAR homes compared to only 43% of spec home buyers.

Increased awareness of the ENERGY STAR label on newly constructed homes is probably due, at least in part, to the increased discussions about energy efficiency measures, heating and cooling costs, and green building with builders and sales agents as reported in Table 3-5. The role of ENERGY STAR in the shopping process for new homes is discussed in detail in Chapter 5.

When asked to describe how ENERGY STAR-labeled homes are different, people who are aware of the label on new homes often mention more insulation, a higher level of efficiency for the house as a whole, more efficient appliances, more efficient heating systems, and more efficient windows. Only six percent of buyers of new ENERGY STAR homes and five percent of all respondents maintain that all newly constructed homes are energy efficient and ENERGY STAR homes are no better than others. This is a significant decrease from 2006 when 15 percent of respondents, including 12 percent of buyers of ENERGY STAR homes held this view. (Table 4-4)

Table 4-4 Understanding of ENERGY STAR-Labeled Homes
 (home buyers who are aware of ENERGY STAR-labeled homes; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	66	64	130
More or better insulation	35% ^{§∇}	55%* ^{Ω§†∇}	49% ^{Ω§†∇}
A higher level of efficiency for the house as a whole	47% ^Ω	44% ^Ω	45% ^{Ω†}
More efficient appliances	32% ^{Ω§†∇}	48%* ^{Ω§†∇}	43% ^{Ω§†∇}
More efficient furnace or boiler/heating system	30% ^{§†∇}	42% ^{Ω§†∇}	38% ^{Ω§†∇}
More efficient windows	27% ^{Ω§∇}	38% ^{Ω§†∇}	35% ^{Ω§†∇}
More efficient central air conditioning	21% ^{Ω§}	31% ^{Ω§†}	28% ^{Ω§†}
More efficient lighting	23% ^{Ω§∇}	19% ^{Ω§∇}	20% ^{Ω§†∇}
Higher quality construction in general	15% ^{Ω∇}	20% ^{Ω†∇}	18% ^{Ω†∇}
Home is tested to verify its energy efficiency	14% ^{§∇}	13% ^{Ω§}	13% ^{Ω§}
Better sealing of air leaks	12% ^{Ω§∇}	11% ^{Ω§∇}	11% ^{Ω§∇}
Better ductwork	3%	14%* ^{Ω†}	11% ^{Ω†}
Better comfort/fewer drafts	3%	14%* [∇]	11% [∇]
ENERGY STAR homes are no better than other homes—all new homes are energy efficient	6% [§]	5%	5% ^Ω
Other	5%	5%	5%
Better framing/two by six framing	3%	5%	4%
Lower bills	2%	5%	4%
Less moisture buildup	0% [§]	5%* [§]	3%
Wood flooring	2%	2%	2%
Energy efficient	3%	0%	1%
Better for environment	2%	0%	1%
Don't know	8% [∇]	6% ^{†∇}	7% ^{Ω§∇}

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

[∇]Significantly different from 2002 at the 90% confidence level.

Table 4-4 Understanding of ENERGY STAR-Labeled Homes (continued)

(home buyers who are aware of ENERGY STAR-labeled homes; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2006			
n	59	33	92
More or better insulation	24% ^v	30% ^v	29% ^{§†v}
More efficient appliances	12% ^{§v}	21% ^{§v}	20% ^{§v}
ENERGY STAR homes are not better; all new homes are energy efficient	12% [§]	15%	15%
More efficient furnace or boiler/heating system	19% ^v	9% ^v	11% ^v
A higher level of efficiency for the house as a whole	27%	6%* ^{§†v}	10% ^{§†v}
More efficient windows	12%	9%	10%
Better comfort/fewer drafts	5%	6%	6%
Lower energy costs	12%	3%*	5%
More efficient lighting	5%	3%	3%
Higher quality construction in general	2% ^{§†}	3%	3% [§]
Better ductwork	0% [†]	3%	3%
Less moisture buildup	0% [§]	3%	3%
More customized	0%	3%	3%
More efficient central air conditioning	10%	0%* ^{§†}	2% [†]
Home is tested to verify its energy efficiency	7%	0%*	1%
Better sealing of air leaks	2% [†]	0%	0% [†]
HERS used to verify performance	2%	0%	0%
Don't know	5% ^{§v}	18%* [§]	16%

Table 4-4 Understanding of ENERGY STAR-Labeled Homes (continued)

(home buyers who are aware of ENERGY STAR-labeled homes; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2004			
n	33	34	67
A higher level of efficiency for the house as a whole	42%	41%	41%
More or better insulation	18%	15%	15%
Higher quality construction in general	12%	12%	12%
More efficient furnace or boiler/heating system	12%	9%	9%
More efficient central air conditioning	3%	9%	8%
ENERGY STAR homes are not better; all new homes are energy efficient	0%	9%*	8%
Better comfort/fewer drafts	12%	6%	7%
More efficient windows	6%	6%	6%
More efficient lighting	3%	6%	6%
More efficient appliances	0%	6%	5%
Better framing/two by six framing	0%	3%	3%
Environmentally friendly	0%	3%	3%
Less moisture buildup	9%	0%*	1%
Better sealing of air leaks	3%	0%	0%
House has been rated	3%	0%	0%
Healthier	3%	0%	0%
Don't know	18%	18%	18%
2003			
N	58	23	81
A higher level of efficiency for the house as a whole	40%	30%	32%
More or better insulation	26%	13%	16%
More efficient appliances	17%	17%	17%
More efficient central air conditioning	16%	13%	14%
More efficient furnace or boiler/heating system	14%	13%	13%
More efficient windows	16%	9%	10%
Higher quality construction in general	16%	4%*	7%
More efficient lighting	12%	9%	9%
Better sealing of air leaks	10%	4%	6%
Better comfort/fewer drafts	5%	9%	8%
Better framing/two by six framing	5%	4%	4%
Better ductwork	5%	0%*	1%
Less moisture buildup	2%	4%	4%
Don't know	3%	26%*	12%

Table 4-4 Understanding of ENERGY STAR-Labeled Homes (continued)

(home buyers who are aware of ENERGY STAR-labeled homes; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2002			
n	56	30	86
More efficient general, uses less energy	36%	57%*	53%
More efficient insulation	11%	13%	13%
Certified, inspected	4%	10%	9%
Save money on energy bills	11%	7%	7%
More efficient/better windows and doors	5%	3%	4%
More efficient appliances	2%	3%	3%
More efficient lighting	0%	3%	3%
More efficient materials/products	5%	0%*	1%
Standards, guidelines	7%	0%*	1%
Better, sealing, tighter	4%	0%	1%
More efficient heating	4%	0%	<1%
Guarantee of energy efficiency	2%	0%	<1%
Better, no mention of efficiency	2%	0%	<1%
Rebate on appliances	2%	0%	<1%
More comfortable	2%	0%	<1%
Quieter	2%	0%	<1%
Environmental benefits	2%	0%	<1%
Don't know	28%	23%	24%

While awareness of the ENERGY STAR label on newly constructed homes increased between 2006 and 2010, significantly fewer aware buyers of new ENERGY STAR homes are aware of the New Homes with ENERGY STAR Program funded by the Massachusetts utilities and energy efficiency providers. Awareness of the program increased, however, among buyers of other homes and all home buyers, reflecting their increased awareness of the ENERGY STAR label on newly constructed homes. Still, the gap between awareness of the ENETGY STAR label on new homes and program awareness for both buyers of ENERGY STAR and other new homes has increased in 2010 over 2006. (Table 4-5)

Table 4-5 Awareness of the Massachusetts New Homes with ENERGY STAR Program

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Yes	28% ^{Ω†}	27% ^{Ω†}	27% ^{Ω§†}
2006			
n	100	100	200
Yes	39% [§]	9% ^{*§}	13%
2004			
n	80	100	180
Yes	25% [†]	18%	19%
2003			
n	100	100	200
Yes	41%	12% [*]	15%
2002			
n	100	129	229
Yes	32%	12% [*]	14%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

Few buyers of ENERGY STAR and other homes have heard of the Home Energy Rating System (HERS) in 2010. One-fifth of buyers of ENERGY STAR homes and one-tenth of buyers of other homes say they are aware of HERS being used to rate the efficiency of a newly constructed home. (Table 4-6)

Table 4-6 Awareness of the Home Energy Rating System (HERS)
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Yes	20% [§]	10%*	13%
2006			
n	100	100	200
Yes	19%	6%*	8% [∨]
2004			
n	80	100	180
Yes	15% ^{†∨}	12%	12%
2003			
n	100	100	200
Yes	25%	10%*	12%
2002			
n	100	129	229
Yes	28%	12%*	13%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

[∞]Significantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

[∨]Significantly different from 2002 at the 90% confidence level.

In a related question, less than one-quarter of buyers of new ENERGY STAR homes are aware of different levels of efficiency that ENERGY STAR homes may achieve. (Table 4-7)

Table 4-7 Awareness of Different Levels of Efficiency
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Yes	24%	15%	18%

Figure 4-1 summarizes the data on the changes in awareness of ENERGY STAR and related issues between 2002 and 2010.

- Almost all buyers of new homes (97%) are now aware of the ENERGY STAR designation in general; in contrast, two-thirds were aware of ENERGY STAR at the time of the first Massachusetts home buyer survey in 2002. Most of the increase in awareness occurred between 2006 and 2010.
- Close to three out of five buyers of new homes are now aware of the ENERGY STAR label on new homes; this is more than twice the percentage who were aware at the time of the first Massachusetts home buyer survey in 2002. Again, most of the increase in awareness occurred between 2006 and 2010.
- Awareness of the Massachusetts New Homes with ENERGY STAR Program more than doubled from 13% to 27% of all buyers of new homes between 2006 and 2010.
- Awareness of the Home Energy Ratings System (HERS) among all buyers of new homes remained low in 2010.

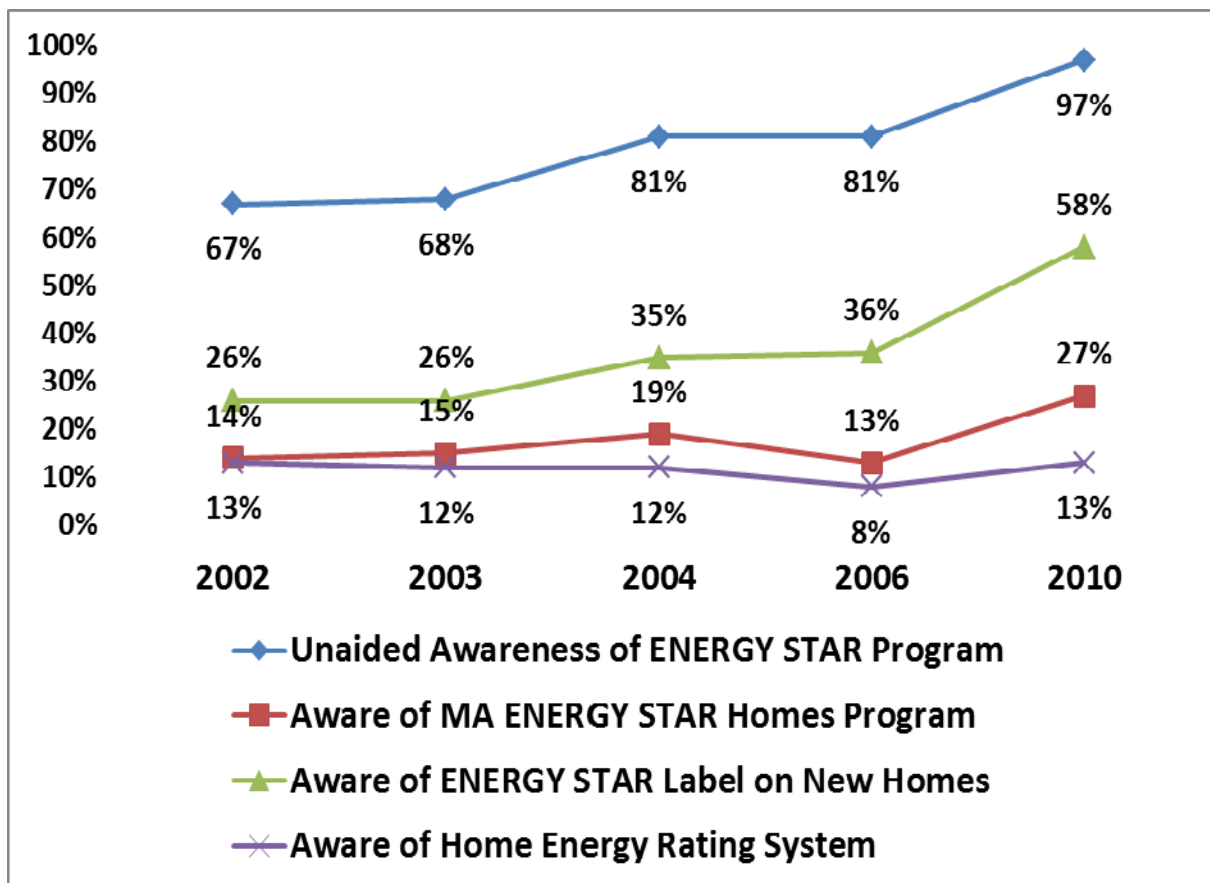


Figure 4-1 Changes in Awareness Between 2002 and 2010—All Home Buyers

4.2 Awareness and Understanding of Green Building

Familiarity with the term “green building”, first introduced into the home buyer survey in 2006, is also significantly higher in 2010, among both buyers of new ENERGY STAR and other homes. In addition to energy efficiency, green building may include water efficiency, use of renewable electric energy generation, site selection to minimize use of undeveloped land, locating near public transportation to minimize car use, smaller or “right-sized” homes, and use of recycled or sustainable materials. In 2010, 74 percent of new home buyers say they are very or somewhat familiar with the term, up from 45 percent in 2006. (Table 4-8)

Table 4-8 Familiarity with Green Building

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Very familiar	43% ^Ω	30%* ^Ω	34% ^Ω
Somewhat familiar	31% ^Ω	44%* ^Ω	40% ^Ω
A little bit familiar	15%	15% ^Ω	15% ^Ω
Never heard of the term	11% ^Ω	11% ^Ω	11% ^Ω
2006			
n	100	100	200
Very familiar	17%	15%	16%
Somewhat familiar	20%	30%	29%
A little bit familiar	10%	7%	7%
Never heard of the term	53%	48%	48%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 homes buyers at the 90% confidence level.

Asked what green building means to them, most respondents, interestingly, mention energy efficiency. This may be partly due to the fact that, at this point in the survey, they had a good idea that energy efficiency was the topic of interest. Respondents, however, are also more likely to mention the use of recycled or sustainable materials and the use of renewable energy in 2010 than in 2006. (Table 4-9)

Table 4-9 Meaning of Green Building
(those with any familiarity of the term; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	89	105	194
Energy efficiency	71%	85%*	81%
Use of recycled, renewable, or sustainable materials such as bamboo	60%	66%	64%
Use of renewable energy such as solar or wind power	19%	34%*	29%
Well insulated home	13%	15%	14%
ENERGY STAR homes	16%	6%*	9%
Water conservation or recapturing wastewater	2%	9%*	7%
Home built on reclaimed or already used land	8%	6%	7%
Environmentally friendly	4%	5%	5%
More comfortable home	4%	4%	4%
Healthy or clean indoor environment	4%	3%	3%
Self-sufficient	0%	3%*	2%
Home near public transportation	2%	2%	2%
Lower bills/saving money	5%	0%*	2%
More expensive	1%	1%	1%
Clean emissions	2%	1%	1%
Better envelope	1%	1%	1%
Less use of fossil fuels	0%	1%	1%
Capture of heat	0%	1%	1%
Geothermal	0%	1%	1%
Small carbon footprint	2%	0%	1%
Smaller sized homes	1%	0%	<1%
Better quality windows	1%	0%	<1%
Tax incentives	1%	0%	<1%
Future use of materials to maintain it	1%	0%	<1%
Up to green standards certification	1%	0%	<1%
Don't know	4%	1%	2%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Table 4-9 Meaning of Green Building (continued)

(those with any familiarity of the term; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2006			
n	47	52	99
Energy efficiency	53%	77%*	75%
Use of recycled, renewable, or sustainable materials such as bamboo	30%	19%	20%
Use of renewable energy such as solar or wind power	15%	10%	10%
Well insulated home	4%	8%	7%
Healthy or clean indoor environment	9%	6%	6%
Environmentally friendly	6%	6%	6%
Higher quality	4%	4%	4%
Home built on reclaimed or already used land	0%	4%	3%
Water conservation or recapturing wastewater	0%	4%	3%
More expensive	0%	4%	3%
ENERGY STAR homes	2%	2%	2%
Smaller sized homes	2%	2%	2%
Don't know	11%	8%	8%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Asked to rate how “green” their new home is on a scale from 0 to 10, where 0 is “not green at all” and 10 is “very high on a green building scale”, buyers of ENERGY STAR homes continue to give their homes significantly higher ratings than other home buyers. (Table 4-10) As noted in the 2006 survey, this is an encouraging sign that many buyers of ENERGY STAR homes are aware of the fact that their homes are built to exceed code in energy efficiency and associate them with green building.

Table 4-10 How Green Do You Consider New Home To Be?

(those with any familiarity with the term;
0 = “not green at all” and 10 = “very high on a green building scale”)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	89	105	194
0-3 rating	1%	7%*	5%
4-7 rating	39%	60%*	53% ^Ω
8-10 rating	57%	31%* ^Ω	39% ^Ω
Don't know	3%	2%	2%
Mean rating	7.9	6.7*	7.0
2006			
n	47	52	99
0-3 rating	0%	8%*	7%
4-7 rating	45%	69%*	68%
8-10 rating	47%	19%*	23%
Don't know	8%	4%	2%
Mean rating	7.3	6.0*	6.1

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 homes buyers at the 90% confidence level.

5 Role of ENERGY STAR in New Home Shopping

Spec home buyers in 2010 are slightly more likely to say they learned about ENERGY STAR homes before rather than after they started shopping for a new home. This finding is difficult to compare to previous years when most survey respondents answered that they did not know when they first learned of ENERGY STAR homes. (Table 5-1)

Table 5-1 When Spec Home Buyers Learned About ENERGY STAR Homes

(spec home buyers who have heard of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	52	33	85
Already knew before starting shopping	50% ^{Ω§†√}	52% ^{Ω§†√}	51% ^{Ω§†√}
Learned after starting shopping	50% ^{Ω§†}	42% ^{Ω§†√}	45% ^{Ω§†√}
Didn't know/not sure	0% ^{Ω§†√}	6% ^{Ω§†√}	4% ^{Ω§†√}
2006			
n	72	42	114
Already knew before starting shopping	27%	15%	17%
Learned after starting shopping	27%	3% ^{§√*}	7% ^{§†√}
Didn't know/not sure	47% [§]	83% [*]	77%
2004			
n	70	51	121
Already knew before starting shopping	19% [†]	16%	17%
Learned after starting shopping	20% [√]	14% [*]	15%
Didn't know/not sure	61% ^{†√}	70% [*]	68%
2003			
n	85	44	129
Already knew before starting shopping	32% [√]	11% [*]	15%
Learned after starting shopping	24% [√]	11% [*]	14%
Didn't know/not sure	45%	77% [*]	72%
2002			
n	87	76	163
Already knew before starting shopping	18%	10%	11%
Learned after starting shopping	36%	12% [*]	15%
Didn't know/not sure	46%	78% [*]	74%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

ΩSignificantly different from 2006 at the 90% confidence level.

§Significantly different from 2004 at the 90% confidence level.

†Significantly different from 2003 at the 90% confidence level.

√Significantly different from 2002 at the 90% confidence level.

Significantly more spec home buyers in 2010 (46%) report visiting at least one ENERGY STAR home while shopping for a new home than in any of the previous years. (Table 5-2) As in previous surveys, a large portion of buyers of new ENERGY STAR homes (44%) do not report visiting ENERGY STAR homes; some of these respondents may not know they have purchased an ENERGY STAR home, as shown later in Table 5-14, and some may have purchased a lot from a builder or a home under construction and thus did not visit a completed home before purchasing. (Respondents were explicitly instructed by the survey to include their own home in the number of homes visited while shopping.)

Table 5-2 Number of ENERGY STAR Homes Visited While Shopping

(spec home buyers who have heard of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	52	33	85
None/not sure	44% ^{Ω§†∇}	58% ^{Ω§†∇}	54% ^{Ω§†∇}
One	25% ^{§†∇}	21% ^{Ω§†∇}	22% ^{Ω§†∇}
Two	15% ^{†∇}	3%*	7% ^{†∇}
Three	6% [∇]	6%	6% ^{Ω†∇}
Four	8% ^{Ω†∇}	3%	5% ^{§†}
Five or more	2%	9% ^{§†∇}	7% ^{§†∇}
2006			
n	72	42	114
None/not sure	64% ^{†∇}	92%*	87% [∇]
One	14% [∇]	3%*	4%
Two	7%	3%	3%
Three	7% [∇]	0%*	1%
Four	<1%	0%	<1%
Five or more	7%	3%	3%
2004			
n	70	51	121
None/not sure	71% [∇]	86%* ^{†∇}	86% [∇]
One	13% [∇]	7% ^{†∇}	7% ^{†∇}
Two	6%	5%	5% ^{†∇}
Three	2%	2%	2%
Four	4% ^{†∇}	0%*	0%
Five or more	2%	0%	0%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

Table 5-2 Number of ENERGY STAR Homes Visited While Shopping (continued)
 (spec home buyers who have heard of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2003			
n	85	44	129
None/not sure	69% [∨]	98%*	92%
One	9%	2%*	4%
Two	11%	0%*	2%
Three	4%	0%*	1%
Four	5%	0%* [∨]	1%
Five or more	0%	0%	0%
2002			
n	87	76	163
None/not sure	84%	97%*	94%
One	5%	0%*	1%
Two	5%	0%*	1%
Three	3%	0%	1%
Four	0%	1%	1%
Five or more	84%	97%*	94%

[∨]Significantly different from 2002 at the 90% confidence level.

Spec home buyers who are aware of ENERGY STAR-labeled homes were asked if they had asked builders or real estate agents about ENERGY STAR, and if builders/real estate agents had brought up the subject. Significantly more buyers brought up the subject of ENERGY STAR homes themselves in 2010 than in previous years. Among buyers of new ENERGY STAR homes, about 70 percent more heard about ENERGY STAR homes from builders rather than bringing up the subject themselves (56% vs. 33%); in contrast, in 2006, nearly three times as many had heard from builders/agents rather than asking about it themselves. For other home buyers, there is a nearly equal split between those who heard about ENERGY STAR homes from builders and sales agents versus those who brought up the subject themselves; too few buyers of other homes answered the question in previous years to offer any meaningful comparison. (Table 5-3)

Table 5-3 Who Brought up the Subject of ENERGY STAR Homes

(spec home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
N	66	64	130
Asked builders/agents	33% ^{Ω§†∨}	30% ^{Ω§†∨}	31% ^{Ω§†∨}
Builders brought it up	56% ^{Ω§†∨}	33%* ^{Ω§†∨}	40% ^{Ω§†∨}
2006			
N	72	42	114
Asked builders/agents	12%	0% ^{§†*}	2% ^{§†}
Builders brought it up	33%	5%*	10%
2004			
N	70	51	121
Asked builders	11%	14% [∨]	14% [∨]
Builders brought it up	30%	14%* ^{†∨}	16% [∨]
2003			
N	85	44	129
Asked builders	19%	7%*	8%
Builders brought it up	35%	2%*	8%
2002			
N	87	76	163
Asked builders	13%	3%*	4%
Builders brought it up	32%	1%*	6%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

ΩSignificantly different from 2006 at the 90% confidence level.

§Significantly different from 2004 at the 90% confidence level.

†Significantly different from 2003 at the 90% confidence level.

∨Significantly different from 2002 at the 90% confidence level.

Table 5-4 and Table 5-5 show—among the few spec home buyers who talked to more than one category of people about ENERGY STAR homes—which categories the home buyers asked about ENERGY STAR homes and which categories brought up the topic with the home buyers, respectively.

Table 5-4 Who Buyers Asked About ENERGY STAR Homes

(spec home buyers who talked to more than one category—from Table 5-3—about ENERGY STAR homes; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2010			
N	8	4	12
Builder/Architect	3	2	5
Real estate agent/company	3	0	3
Family	1	0	1
Representative of builder	1	0	1
Don't remember	0	2	2
2006			
N	21	5	26
No one	8	2	10
Builder	5	2	7
Real estate agent	6	0	6
Plumbing supplier	0	1	1
Training session offered by ENERGY STAR Homes Program	1	0	1
Friends/family	1	0	1

Table 5-5 Who Brought Up Subject of ENERGY STAR Homes

(spec home buyers who talked to more than one category—from Table 5-3—about ENERGY STAR homes; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2010			
N	11	6	17
Myself	6	2	8
Builder	2	0	2
Real estate agent	0	2	2
Builder’s marketing company	2	0	2
Contractor	0	1	1
Owner of company	1	0	1
Realtor and builder	0	1	1
2006			
N	15	3	18
Builder	7	0	7
Utility	0	1	1
Real estate agent	4	1	5
Myself	5	0	5
Sign outside	1	0	1
No one	0	1	1
ENERGY STAR homes program	1	0	1

Home buyers who either asked or were told by builders or agents about ENERGY STAR homes were asked what the builder/agent said. Common responses include a higher level of efficiency for the house as a whole, more or better insulation, more efficient appliances, more efficient windows, and more efficient central air conditioning. (Table 5-6)

Table 5-6 What Builders/Agents Said about ENERGY STAR Homes

(spec home buyers who asked or were told by builders/agents about ENERGY STAR homes; multiple response; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	37	24	61
A higher level of efficiency for the house as a whole	16	13	29
More or better insulation	16	9	25
More efficient appliances	11	8	19
More efficient windows	13	6	19
More efficient central air conditioning	9	6	15
More efficient furnace or boiler/heating system	5	6	11
More efficient lighting	7	3	10
Better framing materials	7	3	10
Better sealing of air leaks	7	2	9
Better comfort/fewer drafts	5	3	8
Home is tested to verify its energy efficiency	4	4	8
Better ductwork	4	3	7
Higher quality construction in general	3	3	6
Will save money in the long run	2	3	5
Less moisture buildup	1	2	3
General program/rebate information	2	1	2
ENERGY STAR homes are no better than other homes— all new homes are energy efficient	1	0	1
Other	2	3	2

Table 5-6 What Builders/Agents Said about ENERGY STAR Homes (continued)(spec home buyers who asked or were told by builders about ENERGY STAR homes;
multiple response; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2006			
n	39	7	46
More efficient furnace or boiler/heating system	9	0	9
More or better insulation	6	1	7
More efficient windows	6	1	7
A higher level of efficiency for the house as a whole	5	1	6
Lower operating costs	4	2	6
More efficient appliances	4	0	4
Home is tested to verify its energy efficiency	4	0	4
ENERGY STAR homes are not better; all new homes are energy efficient	3	0	3
Didn't know much about it/didn't explain well	1	1	2
I did all the research myself	2	0	2
More efficient central air conditioning	1	0	1
Better ductwork	1	0	1
Better sealing of air leaks	1	0	1
More efficient lighting	1	0	1
Better comfort/fewer drafts	1	0	1
Higher quality construction	1	0	1
Last longer	1	0	1
What it means to have an ENERGY STAR home	1	0	1
Every home he builds is ENERGY STAR	1	0	1
Better for the environment	1	0	1
The work required is annoying	0	1	1
Don't know	7	0	7

Table 5-6 What Builders/Agents Said about ENERGY STAR Homes (continued)(spec home buyers who asked or were told by builders about ENERGY STAR homes;
multiple response; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2004			
n	23	11	34
A higher level of efficiency for the house as a whole	6	3	9
More or better insulation	4	1	5
More efficient furnace or boiler/heating system	3	1	4
More efficient central air conditioning	4	0	4
Higher quality construction	4	0	4
Home is ENERGY STAR rated	4	0	4
More efficient windows	3	0	3
More efficient appliances	2	1	3
Lower operating costs	2	1	3
More efficient lighting	2	0	2
Rebates available	1	1	2
ENERGY STAR homes are not better; all new homes are energy efficient	2	0	2
Better sealing of air leaks	1	0	1
Better ductwork	1	0	1
ENERGY STAR is overkill	1	0	1
Less moisture buildup	1	0	1
Better framing/two by six framing	1	0	1
Increases price of home	0	1	1
Increases resale value of home	0	1	1
Forwarded ENERGY STAR brochure	1	0	1
Don't know	3	3	6

Table 5-6 What Builders/Agents Said about ENERGY STAR Homes (continued)

(spec home buyers who asked or were told by builders about ENERGY STAR homes;
multiple response; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2003			
n	33	3	36
A higher level of efficiency for the house as a whole	16	0	16
More or better insulation	9	1	10
More efficient lighting	3	1	4
More efficient central air conditioning	1	2	3
More efficient windows	3	0	3
Better sealing of air leaks	2	0	2
More efficient furnace or boiler/heating system	0	1	1
Better ductwork	1	0	1
More efficient appliances	1	0	1
Better framing/two by six framing	1	0	1
Don't know	5	0	5
2002			
N	31	3	34
More efficient	13	2	15
Lower energy bills	3	0	3
Willing to build to ENERGY STAR specs	1	0	1
Did a demo of the house	1	0	1
On their advertising	1	0	1
All homes they build are ENERGY STAR	1	0	1
How home would be built	1	0	1
Rebates	1	0	1
Tighter home	1	0	1
Will meet building codes	1	0	1
Don't know	9	1	10

Most home buyers (89%) believe builders and sales agents answered their questions about ENERGY STAR homes satisfactorily (Table 5-7); the few who did not most often say they received incomplete information. (Table 5-8)

Table 5-7 Were Your Questions Answered Satisfactorily

(home buyers who discussed topics shown in Table 5-6)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	46	26	72
Yes	89%	89%	89%
No	11%	8%	9%
Don't know	0%	4%	3%
2006			
n	61	41	102
Yes	100%	84%*	86%
No	0%	8%*	7%
Don't know	0%	8%*	7%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Table 5-8 Why Not Satisfied with the Answers Received about ENERGY STAR

(home buyers who were not satisfied with answers to questions about topics discussed as shown in Table 5-6; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	5	0	5
Incomplete info/lack of knowledge	3	na	3
Had to get the info myself	1	na	1
Would rather not discuss	1	na	1
2006			
n	0	5	5
Builder didn't pay attention to energy efficiency	na	1	1
Builder did not know anything	na	1	1
Builder stole our money		1	1
Builder was very arrogant	na	1	1
At that time I thought they were satisfactory, but I found out that they are not satisfactory, because my home qualifies for an ENERGY STAR home	na	1	1

Home buyers in 2010 list 22 sources when they have seen or heard information about ENERGY STAR homes. The most commonly mentioned source is the Internet, followed by magazine ads, newspaper ads, and PA mailings. Not surprisingly, the Internet moved from the fourth most commonly mentioned source in 2006 to the most commonly mentioned source in 2010. (Table 5-9)

Table 5-9 Where Seen or Heard about ENERGY STAR Homes

(home buyers aware of ENERGY STAR homes; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2010			
N	55	54	109
Internet	27%	35%	32%
Magazine ad	24%	22%	22%
Newspaper ad	20%	13%	15%
PA mailing	11%	17%	15%
Television ad	9%	17%	14%
Real estate agent	15%	13%	14%
ENERGY STAR web site	11%	15%	14%
At builder's sales office/model homes	11%	11%	11%
Recommendations by friends or family	7%	9%	8%
Mailings from builders	6%	7%	7%
Home show	6%	6%	6%
Retail store	9%	4%	6%
Builder sign	9%	4%	6%
Television news or announcement	6%	4%	5%
Didn't see or hear any information	6%	4%	5%
Radio ad	4%	2%	3%
Newspaper article	6%	0%*	2%
Spoke to a building/someone in the field	5%	0%*	2%
Town building department	0%	2%	2%
Billboard	0%	2%	1%
Driving around	2%	0%	1%
Through work/school	4%	0%	1%
Don't know	0%	0%	0%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Table 5-9 Where Seen or Heard about ENERGY STAR Homes (continued)

(home buyers aware of ENERGY STAR homes; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2006			
n	59	33	92
Magazine ad	8%	18%	16%
Television ad	7%	15%	16%
At builder's sales office/model homes	14%	12%	12%
Internet	15%	9%	10%
Recommendations by friends or family	5%	9%	8%
ENERGY STAR website	8%	6%	6%
Retail store	7%	6%	6%
Home show	3%	6%	6%
Utility mailing	7%	3%	4%
Newspaper ad	5%	3%	3%
Grand opening event	0%	3%	3%
On a product	0%	3%	2%
Newspaper article	5%	0%*	1%
Television news or announcement	3%	0%	1%
Real estate agent	3%	0%	1%
Radio news or announcement	2%	0%	<1%
Builder sign	2%	0%	<1%
Mailings from builders	2%	0%	<1%
Town building department	2%	0%	<1%
Architect	2%	0%	<1%
HERS rater	2%	0%	<1%
Talking to builder	2%	0%	<1%
Driving around	0%	0%	0%
Billboard	0%	0%	0%
Radio ad	0%	0%	0%
Didn't see or hear any information	17%	9%	10%
Don't know	8%	8%	8%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Table 5-9 Where Seen or Heard about ENERGY STAR Homes (continued)

(home buyers aware of ENERGY STAR homes; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2004			
n	33	34	67
Internet	12%	21%	20%
Magazine ad	21%	18%	18%
Utility mailing	24%	18%	18%
Newspaper ad	0%	12%*	10%
Television ad	12%	9%	9%
Mailings from builders	6%	9%	9%
Newspaper article	0%	9%*	8%
Home show	0%	3%	3%
Radio news or announcement	0%	3%	3%
Real estate agent	6%	6%	6%
Radio ad	6%	6%	6%
Recommendations by friends or family	3%	6%	6%
At builder's sales office/model homes	27%	0%*	3%
Retail store	0%	3%	3%
ENERGY STAR website	3%	3%	3%
Town building department	0%	3%	3%
Insulation contractor	0%	3%	3%
Have seen the label on appliances	3%	3%	3%
Builder sign	6%	0%	1%
At the home they bought	6%	0%	1%
Television news or announcement	3%	0%	0%
Seminar	3%	0%	0%
ENERGY STAR brochure	3%	0%	0%
Didn't see or hear any information	6%	3%	3%
Don't know	6%	3%	3%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Table 5-9 Where Seen or Heard about ENERGY STAR Homes (continued)

(home buyers aware of ENERGY STAR homes; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2003			
n	58	23	81
Newspaper ad	17%	9%	14%
Television ad	14%	9%	12%
At builder's sales office/model homes	12%	9%	11%
Retail store	9%	13%	10%
Real estate agent	14%	0%*	9%
Magazine ad	12%	0%*	8%
Builder sign	10%	4%	8%
Utility mailing	7%	9%	8%
Radio ad	10%	0%*	7%
Recommendations by friends or family	5%	9%	7%
Internet	5%	4%	5%
Billboard	5%	0%*	3%
Newspaper article	2%	4%	3%
Home show	2%	4%	3%
Radio news or announcement	3%	0%	2%
Grand opening event	3%	0%	2%
Driving around	0%	4%	2%
Television news or announcement	2%	0%	1%
Mailings from builders	2%	0%	1%
Other	5%	4%	5%
Didn't see or hear any information	2%	0%	1%
Don't know	2%	22%*	9%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Table 5-9 Where Seen or Heard about ENERGY STAR Homes (continued)

(home buyers aware of ENERGY STAR homes; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2002			
n	56	30	86
Newspaper ads	9%	17%	15%
Magazine ads	7%	13%	12%
Television ads	2%	13%*	11%
Utility mailing	2%	13%*	11%
Builder sign	30%	3%*	8%
Retail store	0%	10%*	8%
Builder's sales office	18%	3%*	6%
Realtors	4%	7%	6%
Realtors	4%	7%	6%
Newspaper article	4%	7%	6%
Mailings from builders	11%	3%	5%
Driving around	0%	7%	5%
Radio ads	2%	3%	3%
Television news or announcement	0%	3%	3%
Home show	2%	3%	3%
Internet	2%	3%	3%
Didn't see or hear	2%	3%	3%
ENERGY STAR web site	0%	3%	3%
Billboard	4%	0%	1%
Recommendations by friends or family	2%	0%	<1%
Don't know	7%	7%	7%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Respondents who were aware of ENERGY STAR homes were asked if they had visited specific websites. The most frequently visited website in 2010 is energystar.gov, the national ENERGY STAR website administered by the EPA. This is followed by massave.com and the individual websites of the PAs. Only 2 percent of respondents visited the Facebook site of the Massachusetts program. More than one-half of respondents did not visit any websites about ENERGY STAR homes. (Table 5-10)

Table 5-10 Websites Visited Regarding ENERGY STAR Homes

(home buyers aware of ENERGY STAR homes; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	66	64	130
energystar.gov—the national ENERGY STAR website run by the EPA	24%	28%	27%
masssave.com	15%	28%	24%
websites of individual Massachusetts electric or gas utilities or Cape Light Compact	21%	19%	20%
the Facebook site of the ENERGY STAR homes program; that is www.facebook.com/MassEnergyStar Homes	2%	2%	2%
Real estate site	5%	0%*	2%
Green Builders Council site	3%	2%	2%
Other	3%	2%	2%
Don't know	3%	5%	2%
Did not visit any websites	55%	52%	53%
2006			
n	59	33	92
energystarhomes.com	30%	18%	20%
energystar.gov	14%	9%	10%
Websites of the Mass Program sponsors	12%	6%	7%
Green building website	0%	3%	2%
Builder or developer website	5%	0%*	1%
Realtor websites	2%	0%	<1%
City or town website	2%	0%	<1%
Newspaper website	2%	0%	<1%
Website showing home layouts	2%	0%	<1%
Don't know	50%	57%	56%
Did not visit any websites	7%	15%	14%
2004			
n	33	34	67
energystarhomes.com	21%	17%	18%
Websites of the Mass Program sponsors	0%	14%*	13%
energystar.gov	6%	6%	6%
Realtor websites	3%	3%	3%
City or town website	3%	3%	3%
Alternative energy website	0%	3%	3%
Don't know	6%	0%	1%
Did not visit any websites	61%	54%	55%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Of the spec home buyers aware of ENERGY STAR homes, one-half had visited model homes while shopping for a new home. (Table 5-11) Of those, more than seven out of ten buyers of new ENERGY STAR homes had noticed the ENERGY STAR logos or literature pertaining to the home. (Table 5-12)

Table 5-11 Visited Model Homes

(spec home buyers aware of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	52	33	85
Yes	60%	46%	50%
No	39%	55%	50%
Don't know	2%	0%	<1%

Table 5-12 Noticed Anything about ENERGY STAR Homes in the Model Home

(spec home buyers who answered 'yes' to Table 5-11; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	31	15	46
ENERGY STAR logo on marketing materials, signs, or welcome mats	61%	47%	51%
Literature about ENERGY STAR Homes	45%	40%	42%
Did not notice anything about Energy Star	19%	40%	33%
ENERGY STAR Label/info on appliances (not counted as noticing materials pertaining to ENERGY STAR homes)	10%	7%	8%

One-half of the buyers of new ENERGY STAR homes who are aware of ENERGY STAR homes think the information they received was very useful—from 8 to 10 on a 0-to-10 scale; more than four out of ten of all home buyers agree that this information was very useful. Buyers of other homes in 2010 are significantly more likely to agree that the information was very useful than in 2006. (Table 5-13)

Table 5-13 Usefulness of Information Gathered about ENERGY STAR Homes

(home buyers aware of ENERGY STAR homes; 0= “not useful at all,” 10= “extremely useful”)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	66	64	130
0-3 rating	8%	8% [†]	8% [†]
4-7 rating	35%	45% [†]	42% ^{Ω†}
8-10 rating	50%	39% ^Ω	43% ^Ω
Don't know	8% ^{Ω†}	8% [†]	8% [†]
Mean rating	7.6	7.2	7.3
2006			
n	59	33	92
0-3 rating	8% [†]	12%	11% [†]
4-7 rating	31%	61% ^{†√*}	56% ^{§†√}
8-10 rating	62% [†]	15% ^{§†√*}	24% ^{§†√}
Don't know	0% [§]	12% ^{†*}	10% [†]
Mean rating	7.8	5.6*	6.0
2004			
n	33	34	67
0-3 rating	10%	15%	14% [†]
4-7 rating	29%	43%	42% [†]
8-10 rating	52%	36%	37% [√]
Don't know	9% [†]	6%	7% [†]
Mean rating	7.9	6.5*	6.7
2003			
n	54	18	72
0-3 rating	15%	33% [√]	30% [√]
4-7 rating	31%	22%	25%
8-10 rating	54%	44%	45%
Don't know	0%	0% [√]	0% [√]
Mean rating	7.0	5.8	6.1
2002			
n	56	30	86
0-3 rating	11%	7%	7%
4-7 rating	34%	33%	34%
8-10 rating	52%	50%	51%
Don't know	4%	10%	8%
Mean rating	7.1	7.3	7.2

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

[√]Significantly different from 2002 at the 90% confidence level.

As in previous years, a significant fraction of buyers of new ENERGY STAR homes, more than two out of five, do not know they have bought an ENERGY STAR home in 2010. A number of other respondents think they have bought ENERGY STAR homes, which—as noted in Chapter 1—may be possible. Some of them may also mistakenly think they have ENERGY STAR homes, just as some of the people who have bought ENERGY STAR homes are not aware of the fact. (Table 5-14)

Table 5-14 Whether New Home is ENERGY STAR

(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
N	100	118	218
Yes	58% [§]	17%* ^{§†}	30% ^{Ω§†}
2006			
N	100	100	200
Yes	55% [§]	10%*	15%
2004			
N	80	100	180
Yes	34% [†]	9%*	12%
2003			
N	100	100	200
Yes	47%	5%*	9%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

Close on one-half of all buyers of ENERGY STAR homes, and the great majority of those who knew they had bought ENERGY STAR homes, knew their homes were ENERGY STAR when they first viewed them or saw the plans. (Table 5-15)

Table 5-15 Knew Home was ENERGY STAR When First Saw it or Viewed the Plans
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
N	100	118	218
Yes	49% [§]	14%* ^{Ω§}	25% ^{Ω§}
2006			
N	100	100	200
Yes	41% [§]	6%*	10% [§]
2004			
N	80	100	180
Yes	21%	6%*	8%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

The few home buyers who did not know their home was an ENERGY STAR home when they first viewed it or saw the plans found out in a variety of ways, as shown in Table 5-16.

Table 5-16 When and How Found Out Home Is an ENERGY STAR Home

(home buyers with ENERGY STAR homes who did not know it when they first viewed it or saw the plans; multiple response; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2010			
N	9	4	13
After I moved in	1	0	1
As I got into the stretch code	0	1	1
Based on the final inspection	0	1	1
Based on the way I wanted to build it	1	0	1
From the builder	0	1	1
When I got certified as an ENERGY STAR home	1	0	1
On the internet when I was looking to turn in old appliances	1	0	1
In the walk through after purchasing	1	0	1
From the label in the utility room	1	0	1
I made it that way through private financing	1	0	1
When they delivered the house	1	0	1
When building it	0	1	1
Don't know	1	0	1
2006			
N	13	4	17
From the builder	1	1	2
When I was shopping	2	0	2
When buying furnace and windows	0	1	1
Halfway in to the building, I found out over the internet	1	0	1
When I contacted ENERGY STAR	1	0	1
When I was building it, having to follow certain guidelines	1	0	1
At the end, before the final inspection	1	0	1
Within a few weeks of building the home	1	0	1
After we purchased it	1	0	1
My husband told me	1	0	1
During construction	1	0	1
I had the certification done	1	0	1
At ground breaking we made some changes in plans so it would qualify	1	0	1
Don't know	0	2	2

Asked how they know their home is an ENERGY STAR home, buyers of ENERGY STAR homes in 2010 most often mention having ENERGY STAR products in the home followed by seeing certification or literature. This is in contrast to 2006 when more buyers of new ENERGY STAR homes gave the more valid answer about seeing some ENERGY STAR certification. (Table 5-17)

Table 5-17 How Know Home Is ENERGY STAR

(home buyers who say they have ENERGY STAR homes;
multiple response; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	74	22	45
ENERGY STAR products in the home	22	10	32
Certified as ENERGY STAR	22	1	23
Builder/Realtor/Contractor told me	10	5	15
Had house rated	6	2	8
Materials/Insulation used	4	2	6
Advertised as ENERGY STAR Home	3	1	4
Because that is what I wanted	4	0	4
Builder was an ENERGY STAR partner	2	0	2
Other	1	1	2

Table 5-17 How Know Home Is ENERGY STAR (continued)(home buyers who say they have ENERGY STAR homes;
multiple response; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2006			
n	55	10	65
Certification/literature	31	0	31
Builder/developer told us	12	2	14
Efficient appliances	6	4	10
We made the decision, we built it that way	5	0	5
Efficient windows	2	3	5
Efficient lighting	4	0	4
Insulation	1	3	4
Siding	1	2	3
Efficient furnace/boiler	1	2	3
Efficient doors	2	0	2
Sign in front of the house	2	0	2
Energy efficient in general	1	1	2
Efficient water heater	1	0	1
Efficient AC	1	0	1
Got a rebate check	1	0	1
Sign at the sales office	1	0	1
Framing	1	0	1
Was advertised that way	1	0	1
Roof	0	1	1
Was constructed in controlled environment	0	1	1
Don't know	1	0	1
2004			
n	27	9	36
Told so by builder	10	0	10
Home was tested/certified	8	0	8
Told so by someone other than builder	3	3	6
Appliances have ENERGY STAR label	2	4	6
Received ENERGY STAR brochure	3	0	3
Home has ENERGY STAR label	0	2	2
Have energy efficient windows	0	2	2
Have energy efficient lighting	1	0	0
Have energy efficient heating system	0	1	1
Have energy efficient air conditioning	0	1	1
Have lower energy bills	1	0	0
Don't know	1	1	2

Most home buyers who know their homes are not ENERGY STAR certified simply say they know their homes have not been certified. Interestingly, eight buyers of new ENERGY STAR homes claim they do not have ENERGY STAR homes; only two had made that claim in 2006 and 2004. (Table 5-18)

Table 5-18 How Know Home Is Not ENERGY STAR

(home buyers who say they do not have ENERGY STAR homes;
multiple response; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	8	48	56
Not certified/rated	5	19	24
Did not use recycled materials/not designed as ENERGY STAR	0	9	9
Builder/realtor did not tell us it was	1	6	7
Not willing to pay for certification	0	4	4
Not finished yet	0	2	2
Other	0	2	2
Don't know	2	6	8
2006			
n	2	15	17
I didn't do anything to make it ENERGY STAR	0	4	4
It's not energy efficient, has not been certified	1	3	4
It should be a selling point and no one ever told me	0	2	2
My appliances are ENERGY STAR but not my home	0	1	1
Heating system is not efficient	0	1	1
There was no label	0	1	1
I don't know if it is or not	1	3	4
2004			
n	2	14	16
There is no certification/rating/label	0	7	7
Don't have high efficiency appliances or other equipment	0	3	3
No one said it was	0	2	2
Don't have a high efficiency heating system	0	1	1
Don't know	2	1	3

A little over one-half of buyers of new ENERGY STAR homes who know their homes are ENERGY STAR, or 32% of all buyers of ENERGY STAR homes, say their homes have an ENERGY STAR label, the same proportion found in 2006. (Table 5-19)

Table 5-19 Whether Home Has an ENERGY STAR Label
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Yes	32% ^{§†}	5%* ^{§†∨}	13% ^{§†∨}
2006			
n	100	100	200
Yes	32% ^{§∨}	6%*	8%
2004			
n	80	100	180
Yes	16% ^{†∨}	4%*	5% [∨]
2003			
n	100	100	200
Yes	36%	3%* [∨]	6% [∨]
2002			
n	100	129	229
Yes	45%	8%*	11%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

[∞]Significantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

[∨]Significantly different from 2002 at the 90% confidence level.

Respondents who say their home has an ENERGY STAR label give a variety of locations, some of which are likely to signify ENERGY STAR appliances and equipment, rather than a certified home. (Table 5-20)

Table 5-20 Where ENERGY STAR Label Is Posted

(multiple response; unweighted numbers shown for 2004, 2006, and 2010)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	35	9	44
<i>Likely to be actual ENERGY STAR home certificate</i>			
In the basement	2	3	5
On paper	5	0	5
Circuit breaker	3	1	4
By the door	3	0	3
Not posted	1	1	2
<i>Unlikely to be actual ENERGY STAR home certificate</i>			
On appliances/windows	9	1	10
On HVAC system	4	2	6
Other	1	0	1
Don't know	7	1	8
2006			
n	32	2	34
<i>Likely to be actual ENERGY STAR home certificate</i>			
Certificate/program binder	7	0	7
In the basement	5	0	5
In the drawer/filing cabinet	4	0	4
On circuit breaker box, fuse box	3	0	3
In the living room	1	0	1
In the garage	1	0	1
On front door or entryway	0	1	1
<i>Unlikely to be actual ENERGY STAR home certificate</i>			
On furnace/boiler	4	0	4
On a model home, on sign for the development	3	0	3
On a window	2	0	2
Don't know	2	1	3
2004			
n	13	4	17
On furnace	1	2	3
In the basement	3	0	3
On circuit breaker box, fuse box	3	0	3
Have label; not put it up yet	3	0	3
On front door or entryway	1	1	2
Certificate	2	0	2
On appliances	0	2	2
Garage	0	1	1

Table 5-20 Where Is ENERGY STAR Label Posted (continued)

(home buyers who say their home has the ENERGY STAR label; multiple response)

	ENERGY STAR Homes	Other Homes	Total
2003			
n	36	3	39
On furnace	14%	33%	30%
In the basement	3%	33%	20%
In sales arrangement, paperwork	6%	0%	<1%
On circuit breaker box, fuse box	6%	0%	<1%
Windows	6%	0%	<1%
Near thermostat, heat control	6%	0%	<1%
Not all tests finished, paperwork not in yet	6%	0%	<1%
Certificate	3%	0%	<1%
On front door	3%	0%	<1%
In office	3%	0%	<1%
Beneath sink	0%	33%	20%
Posted on web site	3%	0%	<1%
Not put label up yet	3%	0%	<1%
Don't know	42%	0%	30%

Figure 5-1 summarizes the awareness of having bought an ENERGY STAR home and the home having a label as a portion of all respondents who bought ENERGY STAR homes over the survey years.

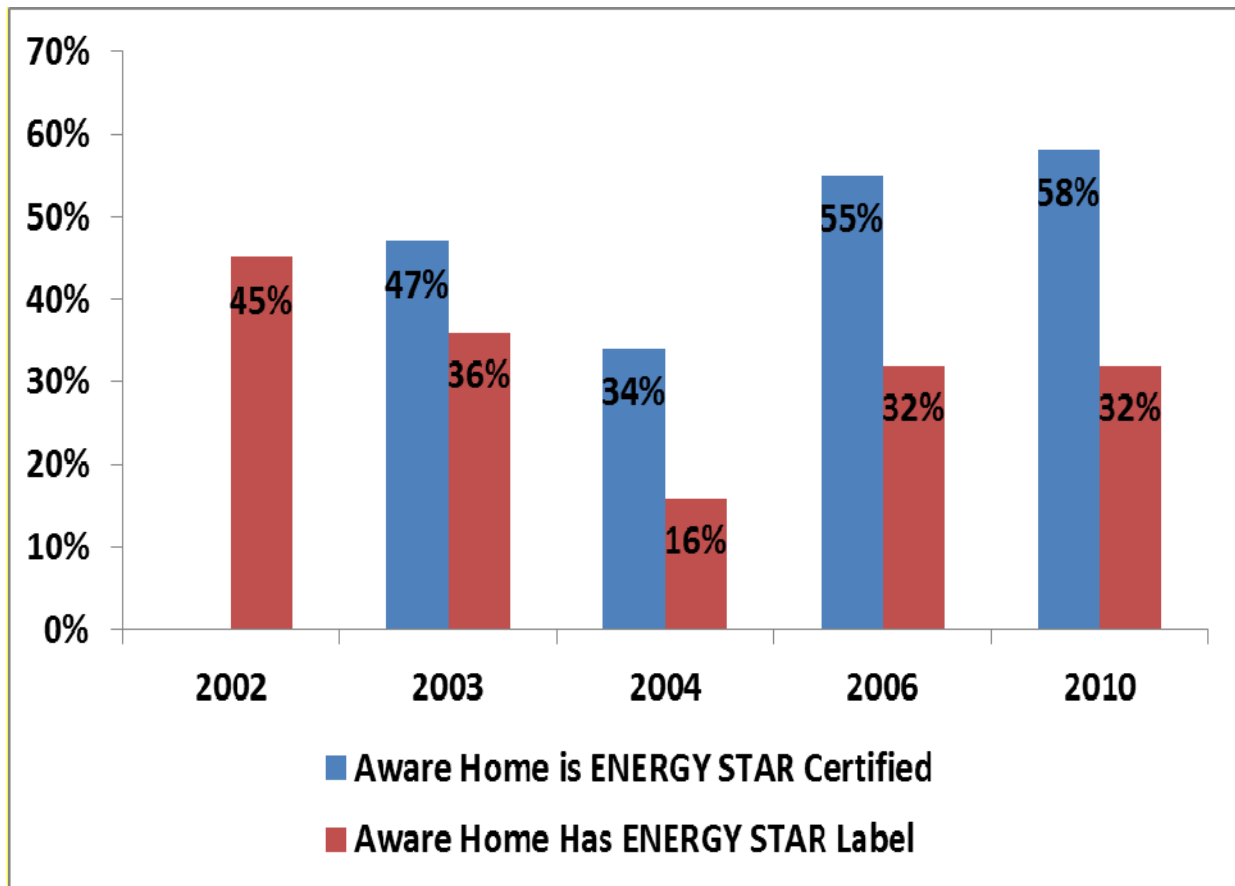


Figure 5-1 Awareness Home Is Certified and Home Has Label by Those Who Bought ENERGY STAR Homes

Table 5-21 shows that nearly two out of three buyers of ENERGY STAR homes decided to buy or build an ENERGY STAR-certified home after they started planning, not from the beginning. This is consistent with findings from previous years. Most likely, they saw a home they liked that had an ENERGY STAR label. These proportions have remained fairly constant over the survey years. Again, this points to the important role of builders or real estate agents in the decision to go with ENERGY STAR.

Table 5-21 When First Decided to Buy/Build ENERGY STAR Home

(home buyers who say they have ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	58	20	78
Intended from the beginning	33%	30%	31%
Decided after started planning	64%	60%	61%
Don't know	3%	10%	8% ^{Ω†}
2006			
n	55	10	65
Intended from the beginning	31%	29%	30%
Decided after started planning	62%	41%	50%
Don't know	8%	29% [†]	20% ^{†‡}
2004			
n	27	9	36
Intended from the beginning	30%	33%	33%
Decided after started planning	63%	45%	50%
Don't know	7%	22%	17% [†]
2003			
n	47	5	52
Intended from the beginning	30%	60%	44%
Decided after started planning	66%	40%	56%
Don't know	4%	0%	<1% [√]
2002			
n	45	10	55
Intended from the beginning	20%	50%*	40%
Decided after started planning	76%	40%*	52%
Don't know	4%	10%	8%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

[√]Significantly different from 2002 at the 90% confidence level.

Just over one-half of buyers of ENERGY STAR homes in 2010 who decided to buy or build an ENERGY STAR home after they started planning for a new home were aware of that their homes were certified before they decided to buy or build a particular home; another four out of ten found out only after they had made the decision to buy or build. (Table 5-22)

Table 5-22 When Became Aware Home Was ENERGY STAR-Certified

(home buyers who decided to buy/build an ENERGY STAR home after planning)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	39	14	53
Before decided to buy/build home	54%	36%	42%
After decided to buy/build home	39%	64%	56%
Don't know	8%	0%*	3%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

As in 2006, most custom home buyers in 2010 who know they have ENERGY STAR homes say they, rather than the builders, came up with the idea to build ENERGY STAR, though there appear to have been more builders proposing ENERGY STAR in 2010. Very few respondents answered this question. (Table 5-23)

Table 5-23 Who Came Up with Idea to Make Home ENERGY STAR-Labeled

(custom home buyers who say they have ENERGY STAR-labeled homes;
unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	14	7	21
Homeowner	6	4	10
Builder	5	2	7
Don't know	3	1	4
2006			
n	12	5	17
Homeowner	9	2	11
Builder	3	0	3
Architect	0	1	1
Don't know	0	2	2

A sizable minority of the respondents who decided to make their home ENERGY STAR certified before buying or building, as shown in Table 5-24, say the label was very important (8 to 10 on a 0-to-10 scale) in their decision to buy or build that particular home. Relatively fewer respondents in 2010 gave the ENERGY STAR certification an 8 to 10 rating than in previous years; however these findings are based on a small number of responses.

Table 5-24 Importance of ENERGY STAR Certification in Deciding to Buy or Build a Particular Home

(home buyers with ENERGY STAR homes who decided before buying/building; 0= “not at all important,” 10= “extremely important”; unweighted numbers shown)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	57	19	76
0-3 rating	11	1	12
4-7 rating	23	7	30
8-10 rating	23	11	34
2006			
n	53	16	69
0-3 rating	6	5	11
4-7 rating	13	8	21
8-10 rating	34	3	37
2004			
n	13	3	16
0-3 rating	1	1	2
4-7 rating	2	0	2
8-10 rating	10	2	12
2003			
n	32	4	36
0-3 rating	3	0	3
4-7 rating	8	1	9
8-10 rating	21	3	24
2002			
n	29	8	37
0-3 rating	4	2	6
4-7 rating	10	3	13
8-10 rating	15	3	18

6 Perceptions of ENERGY STAR Homes

Perceptions of the benefits and costs of ENERGY STAR homes have been tracked by the Massachusetts home buyer survey since 2002. More recently, home buyers have been asked about the non-energy impacts they believe ENERGY STAR homes provide. The 2010 survey also examines home buyer reactions to changes in the Massachusetts Residential New Construction Program.

6.1 Perceptions of the Benefits and Costs of ENERGY STAR Homes

A large minority of respondents who are aware of ENERGY STAR homes continue to either not know or have incorrect perceptions of the typical price differential between ENERGY STAR homes and other homes. The correct responses are “about the same” or “a little higher.” Thirty-eight percent of 2010 respondents gave different answers, up from 33% in 2006. (Table 6-1)

Table 6-1 How Prices for ENERGY STAR Homes Compare with Prices for Other Homes

(home buyers aware of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	66	64	130
A lot lower	0% ^{§†}	2%	1% [†]
A little lower	3%	0% [√]	1% ^{Ω†√}
About the same	27%	17%	20%
A little higher	35%	45%	42% [√]
A lot higher	15% ^{Ω§√}	31%* ^{Ω§†}	26% ^{Ω§†√}
(Don't know)	20%	5%* ^{Ω§†√}	10% ^{Ω§†√}
2006			
n	59	3□	92
A lot lower□	3%	1%	0% [†]
A little lower	3%	6%	6%
About the same	31%	27%	28% ^{§†}
A little higher	41% ^{§†}	39%	39%
A lot higher	5% [§]	9%	9%
(Don't know)	17%	18%	18% ^{§√}

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

[√]Significantly different from 2002 at the 90% confidence level.

**Table 6-1 How Prices of ENERGY STAR Homes Compare with Prices for Other Homes
(continued)**

(home buyers aware of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2004			
n	33	34	67
A lot lower	9% [√]	0%*	1% [†]
A little lower	9%	3%	5%
About the same	34%	15%*	16%
A □ little higher	24%	44%*	41% [√]
A lot higher	0% [†]	6%	5%
(Don't know)	24%	32%	32%
200□			
n	58	23	81
A lot lower	10% [√]	4%	6%
A little lower	5%	4%	6%
About the same	28%	13%	15%
A little higher	26%	39%	36%
A lot higher	10%	9%	9%
(Don't □ now)	21%	30%	28□
2002			
n	56	30	86
A lot lower	0%	3%	3%
A little lower	7%	10%	10%
About the same	39□	20%*	25%
A little higher	36%	27%	28%
A lot higher	4%	7%	5%
(Don't know)	14%	33%*	30%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

†Significantly different from 2003 at the 90% confidence level.

√Significantly different from 2002 at the 90% confidence level.

Respondents in 2010 are significantly more likely to believe that ENERGY STAR homes have monthly costs that are a little or a lot lower than similar homes that are not certified than they were in 2006 (75% versus 57%) and in earlier years. (Table 6-2)

Table 6-2 How Monthly Costs for ENERGY STAR Homes Compare with Those for Other Homes

(home buyers aware of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	66	64	130
A lot lower	27% [√]	25% ^Ω	26% ^{Ω√}
A little lower	50% ^{Ω†}	48%	49%
About the same	11%	14% ^{§†}	13% ^{§†}
A little higher	0% ^{Ω√}	6%*	4%
A lot higher	0% ^Ω	0%	0% ^{Ω†}
(Don't know)	12% ^Ω	6% ^{§†√}	8% ^{§†√}
2006			
n	59	33	92
A lot lower	19% [†]	3%* [§]	6% ^{§†}
A little lower	31% ^{§√}	55%*	51%
About the same	10% [†]	21% ^{§†}	18% ^{§†}
A little higher	10% [†]	9%	9%
A lot higher	7% [§]	6% [§]	7% ^{§√}
(Don't know)	24% [†]	6%* ^{§†}	10% ^{§†√}
2004			
n	33	34	67
A lot lower	21%	18%	19%
A little lower	49%	47%	48%
About the same	9%	0%* [√]	2% [√]
A little higher	3%	12%	9%
A lot higher	0%	0%	0%
(Don't know)	18%	23%	22% [†]

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

[√]Significantly different from 2002 at the 90% confidence level.

Table 6-2 How Monthly Costs for ENERGY STAR Homes Compare with Those for Other Homes (continued)

(home buyers aware of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2003			
n	58	23	81
A lot lower	34% [√]	13%*	17%
A little lower	34% [√]	48%	45%
About the same	21% [√]	0%* [√]	4%
A little higher	0% [√]	4%	4%
A lot higher	2%	9%	8%
(Don't know)	9% [√]	26%*	23% [√]
2002			
n	56	30	86
A lot lower	11%	13%	11%
A little lower	54%	53%	52%
About the same	5%	10%	10%
A little higher	5%	3%	5%
A lot higher	2%	0%	<1%
(Don't know)	23%	20%	21%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

[√]Significantly different from 2002 at the 90% confidence level.

Encouragingly, more than seven out of ten (72%) of home buyers aware of ENERGY STAR homes believe they provide a little or a lot more value for the money, up from just over one-half (53%) in 2006. However, it should be noted that 2006 respondents were particularly skeptical of the value of ENERGY STAR homes and the 2010 numbers reflect 2004 levels. (Table 6-3)

Table 6-3 Value for the Money Provided by ENERGY STAR Homes Compared to Other Homes

(home buyers aware of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	66	64	130
A lot less value for the money	2%	2%	2%
A little less value for the money	2% ^Ω	5% ^{§†}	4% ^{Ω§}
About the same value for the money	9%	17% ^{§†}	15% [§]
A little more value for the money	29%	44%* ^Ω	39%
A lot more value for the money	47% [∇]	27%*	33% ^{†∇}
(Don't know)	12%	6% ^{§†∇}	8% ^{§†∇}
2006			
n	59	33	92
A lot less value for the money	2%	6%	6% ^{§∇}
A little less value for the money	10% [§]	12% ^{§†}	11% ^{§†}
About the same value for the money	9%	24%* ^{§†}	21% ^{§†}
A little more value for the money	29%	27% [§]	29% ^{§∇}
A lot more value for the money	41%	21%*	24%
(Don't know)	10%	9% ^{§†}	9% ^{§†∇}
2004			
n	33	34	67
A lot less value for the money	3%	0%	0% [†]
A little less value for the money	0% ^{†∇}	0%	0% [∇]
About the same value for the money	12%	6%	6%
A little more value for the money	43% [†]	47%	47%
A lot more value for the money	33%	23%	24%
(Don't know)	9%	24%*	23%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

[∇]Significantly different from 2002 at the 90% confidence level.

Table 6-3 Value for the Money Provided by ENERGY STAR Homes Compared to Other Homes (continued)

(home buyers aware of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2003			
n	58	23	81
A lot less value for the money	7%	4%	6% [√]
A little less value for the money	5%	0%*	2%
About the same value for the money	14%	4%	8%
A little more value for the money	24% [√]	43%	40%
A lot more value for the money	38%	13%*	17%
(Don't know)	12%	35%*	28%
2002			
n	56	30	86
A lot less value for the money	4%	0%	0%
A little less value for the money	5%	7%	7%
About the same value for the money	14%	13%	13%
A little more value for the money	39%	43%	43%
A lot more value for the money	27%	17%	18%
(Don't know)	11%	20%	18%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

[√]Significantly different from 2002 at the 90% confidence level.

Another encouraging finding is that significantly fewer respondents in 2010 (29%) agree or strongly agree with the statement that “all new homes are energy efficient” than in 2006 (41%) or 2004 (43%). (Table 6-4)

Table 6-4 Agreement with the Statement “All New Homes Are Energy Efficient”
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Strongly agree	5%	4% [§]	4% [§]
Agree	23%	26% ^Ω	25% ^Ω
Neither agree nor disagree	19%	17% [§]	18% [§]
Disagree	40%	39%	39% ^Ω
Strongly disagree	9%	10%	10%
Don't know	4% ^Ω	3%	3%
2006			
n	100	100	200
Strongly agree	3%	3% [§]	3% [§]
Agree	25%	39%*	38%
Neither agree nor disagree	15%	18% [§]	18% [§]
Disagree	35%	30%	31%
Strongly disagree	12%	7%	8%
Don't know	10%	3%*	4%
2004			
n	80	100	180
Strongly agree	4%	13%*	12%
Agree	25%	31%	31%
Neither agree nor disagree	18%	7%*	8%
Disagree	41%	37%	37%
Strongly disagree	6%	11%	11%
Don't know	6%	1%*	1%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Ω Significantly different from 2006 at the 90% confidence level.

§Significantly different from 2004 at the 90% confidence level.

Most home buyers, however, agree or strongly agree with the statement “my new home is energy efficient” with buyers of new ENERGY STAR homes significantly more likely to strongly agree with the statement, both in comparison to buyers of other homes in 2010 and buyers of ENERGY STAR homes in 2006. (Table 6-5)

Table 6-5 Agreement with the Statement “My New Home Is Energy Efficient”
(all home buyers)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	100	118	218
Strongly agree	51% ^Ω	30%*	37% ^Ω
Agree	45% ^Ω	57%*	53%
Neither agree nor disagree	3%	7%	6%
Disagree	1%	4%	3%
Strongly disagree	0%	1%	1%
Don't know	0%	2%	1% ^Ω
2006			
n	100	100	200
Strongly agree	31%	25%	26%
Agree	59%	52%	53%
Neither agree nor disagree	6%	10%	10%
Disagree	1%	5%*	5%
Strongly disagree	2%	2%	2%
Don't know	1%	6%*	6%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^Ω Significantly different from 2006 at the 90% confidence level.

One-half of all respondents who are aware they have bought ENERGY STAR homes say their utility bills have been lower than they had expected since moving into their new homes, up from two out of five in 2006. (Table 6-6)

Table 6-6 Notice Utility Bills Lower Than Expected Since Moving into New Home
(home buyers who say they have ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	58	20	78
Yes	50% ^{§√}	35% ^{§√}	40% ^{§√}
2006			
n	55	10	65
Yes	40%	40%	40% ^{§√}
2004			
n	27	9	36
Yes	33% ^{†√}	11% ^{†√}	19% ^{†√}
2003			
n	47	5	52
Yes	53%	60%	53%
2002			
n	45	10	55
Yes	56%	70%	64%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

^ΩSignificantly different from 2006 at the 90% confidence level.

[§]Significantly different from 2004 at the 90% confidence level.

[†]Significantly different from 2003 at the 90% confidence level.

[√]Significantly different from 2002 at the 90% confidence level.

6.2 Perceptions of Non-Energy Impacts

Most respondents who say they have bought ENERGY STAR homes believe those homes provide several non-energy impacts (phrased as non-energy benefits in the survey) over what a newly constructed non-ENERGY STAR home would provide. (Table 6-7)

Table 6-7 Believe ENERGY STAR Homes Provide Non-Energy Impacts

(home buyers who say they have ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	58	20	78
Greater comfort/more even heating and cooling	81%	90%	85%
Quieter with less outdoor noise	79%	90%	84%
Healthier indoor air quality	67%	85%*	75%
Better resale value	71%	75%	72%
Protection against energy price increases	64%	85%*	73%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Most respondents who believe ENERGY STAR homes provide non-energy impacts also say these impacts influenced their decision to purchase an ENERGY STAR home. This means that, overall, about three out of five respondents who say they have bought an ENERGY STAR home also say that their purchase decision was influenced by non-energy impacts. (Table 6-8)

Table 6-8 Whether Non-Energy Impacts Influenced the Purchase of an ENERGY STAR Home

(home buyers who say they have ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
n	58	20	78
Greater comfort/More even heating and cooling	57%	80%*	67%
Quieter	57%	60%	58%
Healthier indoor air quality	48%	75%*	60%
Better resale value	60%	65%	62%
Protection against energy price increases	53%	70%	61%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Figure 6-1 summarizes the perceived presence and influence of NEIs.

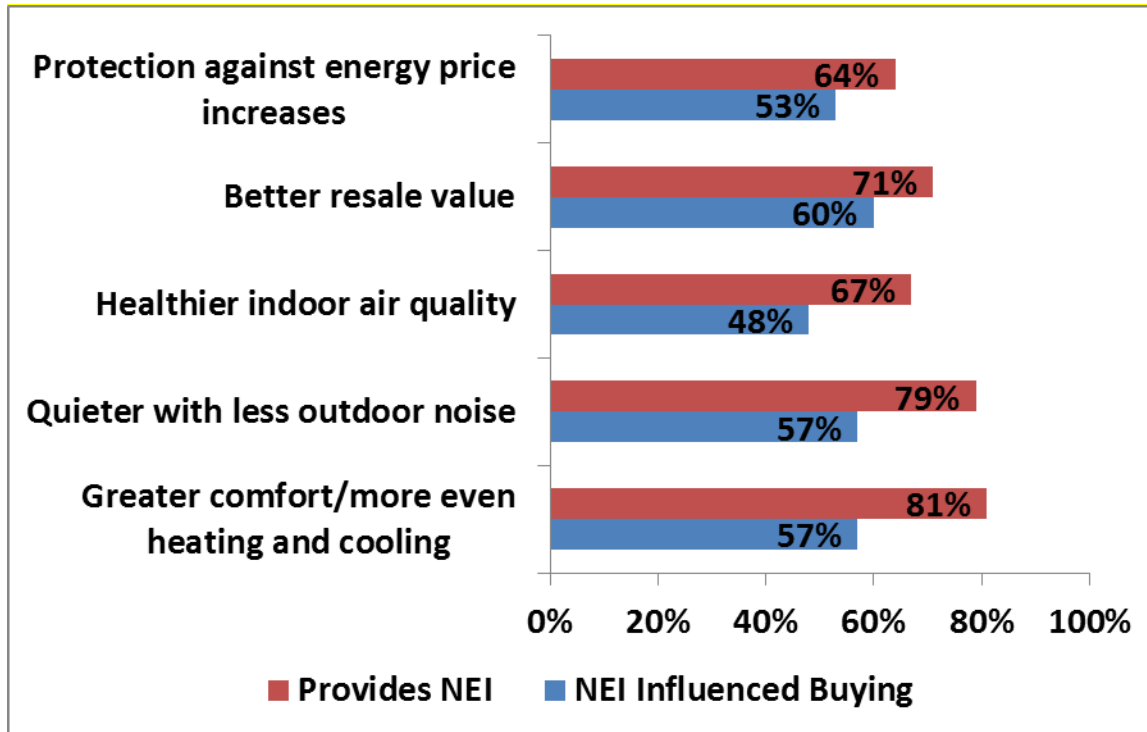


Figure 6-1 Presence and Influence of Non-Energy Impacts

Non-energy impacts of ENERGY STAR homes had been studied more extensively in a survey of 70 home buyers in 2008. These respondents knew they had bought ENERGY STAR certified homes in 2007 and had spent a winter in their new homes. As Table 6-9 shows, in both years, the vast majority of respondents believed their homes provided certain non-energy impacts.

Table 6-9 Comparison of Home Buyers Who Believe Home Has Non-Energy Impacts, 2010 and 2007

(buyers of ENERGY STAR homes who know they have ENERGY STAR homes)

	ENERGY STAR Homes in 2010	ENERGY STAR Homes in 2007
n	58	70
Greater comfort/more even heating and cooling	81%	87%
Quieter with less outdoor noise	79%	70%
Healthier indoor air quality	67%	53%
Better resale value	71%	81%
Protection against energy price increases	64%	94%*

*Significantly different from buyers of ENERGY STAR homes in 2010 at the 90% confidence level.

6.3 Program Satisfaction and Reaction to Changes

Overall satisfaction with the Massachusetts New Homes with ENERGY STAR Program has remained high with nearly three-quarters of buyers of ENERGY STAR homes who know they have ENERGY STAR homes saying they are ‘satisfied’ or ‘extremely satisfied’. (Table 6-10) Two respondents say they are dissatisfied; one because the incentives were not high enough, and one because the efficiency level was considered to be too low.

Table 6-10 Overall Satisfaction with the ENERGY STAR Homes Program

(home buyers who say they have ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	58	20	78
Extremely satisfied	29%	20% ^{Ω§∇}	23% ^{§†∇}
Satisfied	45%	60% ^{§†}	55% ^{§†}
Neither satisfied nor dissatisfied	9%	10%	10% ^Ω
Dissatisfied	3%	0%	1% [†]
Extremely dissatisfied	0%	0%	0% ^{Ω§}
(Don't know)	14% ^{Ω§∇}	10%	11% [∇]
2006			
n	55	10	65
Extremely satisfied	29%	0%* ^{§∇}	14% ^{§†∇}
Satisfied	49%	40%	45% ^{§†}
Neither satisfied nor dissatisfied	11%	30% ^{§†∇}	21% ^{§†∇}
Dissatisfied	4%	0%	0% ^{§†}
Extremely dissatisfied	4%	20%	14% ^{§†∇}
(Don't know)	4%	10%	7% [∇]
2004			
n	27	9	36
Extremely satisfied	30%	56%	46%
Satisfied	52%	11%*	23% [∇]
Neither satisfied nor dissatisfied	15%	0%*	4%
Dissatisfied	0%	11%	9% [∇]
Extremely dissatisfied	0%	11% [†]	9% [∇]
(Don't know)	3%	11%	9% [∇]

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

ΩSignificantly different from 2006 at the 90% confidence level.

§Significantly different from 2004 at the 90% confidence level.

†Significantly different from 2003 at the 90% confidence level.

∇Significantly different from 2002 at the 90% confidence level.

Table 6-10 Overall Satisfaction with the ENERGY STAR Homes Program (continued)
(home buyers who say they have ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2003			
n	47	5	52
Extremely satisfied	38%	40%	40%
Satisfied	43%	20%	30%
Neither satisfied nor dissatisfied	9%	0%*	5%
Dissatisfied	4%	20%	10% [√]
Extremely dissatisfied	0%	0%	0%
(Don't know)	6%	20%	15% [√]
2002			
n	45	10	55
Extremely satisfied	31%	60%	52%
Satisfied	56%	40%	44%
Neither satisfied nor dissatisfied	11%	0%*	4%
Dissatisfied	0%	0%	0%
Extremely dissatisfied	0%	0%	0%
(Don't know)	2%	0%	<1%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

[√]Significantly different from 2002 at the 90% confidence level.

Changes to the Massachusetts program where homes are certified into one of three tiers, but do not have to be ENERGY STAR certified and have a label, were briefly explained to respondents who are aware of ENERGY STAR homes. Three out of ten respondents say that going through the program would be very important if they were building or buying a new home today and an additional one-third believe program participation would be somewhat important. (Table 6-11)

Table 6-11 Importance of Having New Home Go Through the Massachusetts Program
(home buyers aware of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	66	64	130
Very Important	35%	28%	30%
Somewhat Important	30%	36%	34%
Nice if it participated, but no big deal	24%	23%	23%
Not a factor at all in my decision to buy or build	11%	13%	12%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Respondents who did not believe having a new home participate in the Massachusetts program was very important were then asked if it would be more important for them to go through the program if it were still requiring that all participating homes be certified and labeled ENERGY STAR homes. Over one-third, including two out of five buyers of ENERGY STAR homes, say that ENERGY STAR certification would make program participation more important. (Table 6-12)

Table 6-12 Would It Be More Important for New Homes to Participate if Still Required ENERGY STAR Certification

(home buyers aware of ENERGY STAR homes who do not believe it is very important for new homes to participate in the Massachusetts program)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	43	46	89
Yes	40%	33%	35%
No	40%	54%	50%
Don't know	21%	13%	15%

The last question in this series asked if respondents believed that homes that go through the Massachusetts program are energy efficient even if they are not certified as ENERGY STAR and have a label. Less than two out of five respondents agreed with this statement; an additional two out of five believe these homes are more energy efficient than homes that do not go through the program, but not as efficient as if they had gone through the certification process. These findings must be considered in light of the reduced, though still high, importance given to ENERGY STAR home certification in Table 3-1. It is important to remember that the people interviewed for this survey are not in the market for a new home—at best, they are reflecting on their recent experiences in building or buying a new home. Still, it is apparent that, after several years of promotion, the ENERGY STAR brand does offer some assurance that a home is energy efficient to at least the home buyers that are aware homes can be ENERGY STAR certified. (Table 6-13)

Table 6-13 Whether Homes that Go Through the Program Are Energy Efficient if They Are Not ENERGY STAR Certified

(home buyers aware of ENERGY STAR homes)

	ENERGY STAR Homes	Other Homes	Total
2010			
n	66	64	130
Yes, homes are energy-efficient; it doesn't matter if they have a label	39%	38%	38%
They are more energy efficient than homes that do not go through the program, but not as efficient as if they had gone through the certification process	32%	45%	41%
They are no more efficient than other new homes on the market	14%	11%	12%
Don't know	15%	6%*	9%

*Significantly different from buyers of ENERGY STAR homes at the 90% confidence level.

Appendix A: Survey Instrument for All Buyers of Newly Constructed Homes

MA RNC 2011—Home Buyer Survey Guide

Hello, my name is _____, and I'm calling on behalf of [READ SPONSOR FROM SAMPLE] [if Barnstable county, add "and Cape Light Compact"] about the needs and preferences of new home buyers. The survey should take around 15 minutes, and the information you provide will help [READ SPONSOR FROM SAMPLE] improve its energy efficiency programs and services which will, in turn, help keep energy costs as low as possible by reducing consumption. Your responses will be kept strictly confidential. **[IF RESPONDENT IS ON THE BASELINE LIST]** At the end of this survey, I will also be asking you about your willingness to participate in a project involving home visits for which you will be compensated and about which you may have received a letter in the mail.

1. I just want to confirm that your home is newly constructed—that is, built within the last two years or so. Is that correct?
 1. Yes **[CONTINUE]**
 2. No **[THANK AND TERMINATE]**
 3. (Don't know/refused) **[THANK AND TERMINATE]**

2. Are you the person or one of the people who bought the home?
 1. Yes **[CONTINUE]**
 2. No, someone else in home **[ASK TO SPEAK TO PROPER PERSON AND BEGIN AGAIN OR RESCHEDULE FOR WHEN THE PROPER RESPONDENT WILL BE AVAILABLE]**
 3. No, not available **[THANK AND TERMINATE]**
 4. (Don't know/refused) **[THANK AND TERMINATE]**

3. What type of building is your home? **[READ RESPONSES]**
 1. Detached single-family home
 2. Townhouse or duplex, with a wall separating the units from basement to roof, and with separate utilities for each unit
 3. Two, three, or four family building—with no basement walls separating the units, or with one water and sewer bill for the whole building
 4. Part of a building with 5 or more units
 5. Other **[SPECIFY: _____]**
 6. (Don't know/refused) **[THANK AND TERMINATE]**

[IF Q3 EQ 4, RESPONDENT IS SPEC]

4. **[IF “DETACHED SINGLE-FAMILY HOME” “TOWNHOUSE OR DUPLEX”OR “TWO- TO FOUR-FAMILY HOME” TO Q.#3]** Which of the following best describes how you purchased your home?
1. Purchased land and worked with an architect and/or builder to design and build the home.
 2. Had a house plan and a lot and hired a contractor/builder to build the home.
 3. Purchased a lot from a builder, selected one of several house plans offered by the builder and selected from various available upgrade options.
 4. Purchased a home that was under construction and selected from various available upgrade options.
 5. Purchased a finished home
 6. (Other **[SPECIFY: _____]**)
 7. I/we am/are the owner(s) and builder(s)
 8. (Don't know)

[IF Q4 EQ 1 OR 2 OR 7, RESPONDENT IS CUSTOM]

[IF Q4 EQ 3 OR 4 OR 5, RESPONDENT IS SPEC]

[IF Q.#4 NE 1, 2, OR 7 READ:] How important were the following factors in your decision to buy this home rather than another home?

[IF Q.#4 EQ 1, 2, OR 7 READ:] How important were the following factors in your decision to build this home rather than buying another home?

[FOR ALL, READ:] Use a scale from 0 to 10, where 0 is “one of the least important factors” and 10 is “one of the most important factors.” If a particular feature does not apply to your home or your purchase decision, say “does not apply” **[READ AND ROTATE Q.#5 -29] [11=DOES NOT APPLY; 12=DON'T KNOW]**

5. The size of the home
6. Keeping down the overall purchase price of the home
7. Room layout or design
8. Quality of construction
9. Builder reputation
10. Being involved in decisions about features of the home
11. Having a kitchen with upgraded cabinets and countertops and high end appliances
12. Getting a more efficient home with lower energy bills
13. Number of bathrooms and/or bathrooms with nice features such as whirlpool baths
14. Lack of availability of other suitable homes
15. More or better insulation including blown-in insulation with a higher R value
16. Good-sized lot
17. A more efficient furnace or boiler
18. Better sealing of air leaks
19. Good location
20. More efficient appliances
21. More efficient windows such as double and triple pane or windows with a low e value

22. Better comfort/fewer drafts
23. Healthier indoor air
24. Use of renewable energy and other green building measures
25. Having a certified ENERGY STAR home or a home with an ENERGY STAR label
26. Good interior finish details—no gaps in joints, ceiling medallions, wainscoting, chair rails, wood doors and trim
27. Good exterior finish details—wood siding, exterior trim details, no gaps in joints
28. Community amenities (such as a good neighborhood feel, bike trails, community pool, recreation center, access to public transportation)
29. Commuting distance or time to work
30. Good schools

31. Is there anything I have not mentioned that was an important factor in you choosing to build or buy this particular home than another home? **[MULTIPLE RESPONSE]**
 1. Yes **[SPECIFY: _____]**
 2. No

32. How familiar would you say you are with the term “green building”? Would you say you are **[READ RESPONSES]**
 1. Very familiar
 2. Somewhat familiar
 3. A little bit familiar
 4. I’ve never heard of the term **[SKIP TO Q#35]**

33. What does green building mean to you? **[DO NOT READ RESPONSES; PROBE (IS THERE ANYTHING ELSE?) RECORD AS MANY AS APPROPRIATE]**
 1. (Energy efficiency)
 2. (ENERGY STAR)
 3. (Well insulated)
 4. (More comfortable home)
 5. (Use of recycled/renewable/sustainable materials; use of bamboo)
 6. (Healthy/clean indoor air)
 7. (Smaller sized homes)
 8. (Use of renewable/solar/photovoltaic/wind power)
 9. (Water conservation; recapturing wastewater)
 10. (Home is near public transportation/within walking distance of where I need to go)
 11. (Home is built on reclaimed/already used land)
 12. (Other **[SPECIFY _____]**)
 99. (Don’t know)

34. Using a scale from 0 to 10, where 0 is “not green at all” and 10 is “very high on a green building scale,” how green do you consider your new home to be? **[RECORD NUMBER; 11=DON’T KNOW]**

35. How strongly do you agree or disagree with the following statement: “All new homes are energy efficient.” **[READ RESPONSES]**
 1. Strongly agree

2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. (Don't know)

36. How strongly do you agree or disagree with the following statement: “My new home is energy efficient.” **[READ RESPONSES]**

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. (Don't know)

37. Have you ever seen or heard of the ENERGY STAR label?

1. Yes **[CONTINUE]**
2. No **[SKIP TO Q.#47]**
3. (Don't know/refused) **[SKIP TO Q.#47]**

38. What does the ENERGY STAR label mean to you? **[PROBE UP TO THREE RESPONSES]**

39. Have you ever seen or heard of a newly constructed home being referred to as an ENERGY STAR home?

1. Yes
2. No **[GO TO Q.#47]**
3. (Don't know) **[GO TO Q.#47]**

[ASK Q.#40-46 IF Q.#39=1]

40. How is a new ENERGY STAR home different from a new non-ENERGY STAR home? **[PROBE FOR SPECIFICS; DO NOT READ RESPONSES; MULTIPLE RESPONSE]**

1. (More or better insulation)
2. (More efficient central air conditioning)
3. (More efficient furnace or boiler/heating system)
4. (Better ductwork)
5. (Better sealing of air leaks)
6. (More efficient appliances)
7. (More efficient lighting)
8. (More efficient windows)
9. (Better framing/two by six framing)
10. (Better comfort/fewer drafts)
11. (Less moisture buildup)
12. (A higher level of efficiency for the house as a whole)

13. (Higher quality construction in general)
14. (ENERGY STAR homes are no better than other homes—all new homes are energy efficient)
15. (Home is tested to verify its energy efficiency)
16. (Other [SPECIFY: _____])
99. (Don't know)

41. Are you aware of the New Homes with ENERGY STAR Program funded by Massachusetts utilities and energy efficiency providers, and specifically tailored for Massachusetts home buyers and builders?

1. Yes
2. No
3. (Don't know)

42. **[IF Q.#4 NE 1 OR 2]** Did you know about ENERGY STAR homes before you started shopping for your new home, or did you learn about ENERGY STAR homes after you started shopping?

1. Already knew before I started shopping
2. Learned after I started shopping
3. (Don't know)

43. Is your home an ENERGY STAR home?

1. Yes
2. No **[SKIP TO Q.#46]**
3. (Don't know) **[SKIP TO Q.#46]**

44. **[IF Q.#43=YES]** Did you know your home was an ENERGY STAR home when you first viewed it or first saw the plans?

1. Yes **[SKIP TO Q.#46]**
2. No
3. (Don't know)

45. **[IF Q.#44 EQ 2 OR 3]** When and how did you find out your home is an ENERGY STAR home? **[PROBE FOR DETAILS]**

46. **[IF Q.#4 NE 1 OR 2]** Including your own home **[USE PRECEDING PHRASE ONLY IF Q.#43=1]** How many ENERGY STAR homes did you visit when you were shopping for a new home? **[0=NONE, 99=DON'T KNOW]**

47. **[IF Q.#4 NE 1 OR 2]** Did you get information about your new home and the features and options to consider for it from real estate agents, the building company's marketing department, the builders themselves, the Internet, or some combination of the above? **[MULTIPLE RESPONSE]**

1. Real estate agents
2. Building company's marketing department
3. Builders

4. Internet [GO TO Q.#47a]
5. (Other [SPECIFY: _____])
6. (Don't know)

47a. [IF Q.#47 EQ 4] What types of, or, if you remember, specific Internet sites did you visit to get information about your new home? [PROBE UP TO THREE RESPONSES]

48. [IF Q.#4 NE 1 OR 2] Did you discuss any of the following with people you talked to while shopping for, designing, or constructing your new home? [IF Q.#4 EQ 1 OR 2] Did you discuss any of the following with your builder?

1. Energy efficiency of a new home
2. Energy efficiency of heating and/or cooling equipment
3. Type of insulation used
4. How much it would cost to heat and cool the home
5. Indoor air quality
6. Green building

48a. [IF YES TO ANY OF Q#48] Did they answer your questions satisfactorily?

1. Yes [SKIP TO Q.#49 OR Q#84]
2. No
3. (Don't know) [SKIP TO Q.#49 OR Q#84]

48b. Why were you not satisfied with the answers you received? [PROBE FOR DETAILS]

[IF Q#39 NE 1, SKIP TO Q#84]

49. Did you ask [IF Q#4 EQ 1 OR 2] (your builder) [IF Q#4 NE 1 OR 2] (anyone) about ENERGY STAR when you were making your plans for building or buying a home?

1. Yes [CONTINUE]
2. No [SKIP TO Q.#51]
3. (Don't know/refused) [SKIP TO Q.#51]

50. [IF Q.#4 NE 1 OR 2 AND Q#47 HAS MORE THAN ONE RESPONSE] Who did you ask about ENERGY STAR homes?

51. Did [IF Q.#4 EQ 1 OR 2] (your builder) [IF Q.#4 NE 1 OR 2] (they) bring up the subject of ENERGY STAR homes?

1. Yes
2. No
3. (Don't know/refused)

[ASK Q#52 TO Q#53b IF Q#49 OR Q#51 EQ 1; ELSE SKIP TO Q#54]

52. [IF Q.#4 NE 1 OR 2 AND Q#44 HAS MORE THAN ONE RESPONSE] Who brought up the subject of ENERGY STAR homes? [MULTIPLE RESPONSE]

53. What did they tell you about ENERGY STAR homes? **[PROBE FOR SPECIFICS; DO NOT READ RESPONSES; MULTIPLE RESPONSE]**

1. (More or better insulation)
2. (More efficient central air conditioning)
3. (More efficient furnace or boiler/heating system)
4. (Better ductwork)
5. (Better sealing of air leaks)
6. (More efficient appliances)
7. (More efficient lighting)
8. (More efficient windows)
9. (Better framing materials)
10. (Better comfort/fewer drafts)
11. (Less moisture buildup)
12. (A higher level of efficiency for the house as a whole)
13. (Higher quality construction in general)
14. (ENERGY STAR homes are no better than other homes—all new homes are energy efficient)
15. (Homes is tested to verify its energy efficiency)
16. (Other [SPECIFY: _____])
99. (Don't know)

53a. Did they answer your questions about ENERGY STAR Homes satisfactorily?

1. Yes **[SKIP TO Q.#54]**
2. No
3. (Don't know) **[SKIP TO Q.#54]**

53b. Why were you not satisfied with the answers you received? **[PROBE FOR DETAILS]**

54. Where have you seen or heard information about ENERGY STAR homes? **[DO NOT READ RESPONSES; PROBE UP TO FOUR RESPONSES]**

1. (Newspaper ad)
2. (Magazine ad)
3. (Television ad)
4. (Radio ad)
5. (Radio news or announcement)
6. (Television news or announcement)
7. (Newspaper article)
8. (Utility mailing)
9. (Retail store)
10. (Home show)
11. (Billboard)
12. (Builder sign)
13. (Internet)
14. (Driving around)
15. (Recommendations by friends or family)
16. (Mailings from builders)
17. (Real estate agent)
18. (Grand opening event)
19. (ENERGY STAR web site)
20. (At builder's sales office/model homes)
21. (Town building department)
22. (Other **[SPECIFY _____]**)
23. (Didn't see or hear any information)
99. (Don't know)

55. **[IF Q.#4 NE 1 OR 2]** Did you visit any model homes while shopping for a home?

1. Yes
2. No **[SKIP TO Q.#57]**
3. (Don't know) **[SKIP TO Q.#57]**

56. Did you notice anything about ENERGY STAR Homes in the model home such as...

1. Literature about ENERGY STAR Homes
2. The ENERGY STAR logo on marketing materials, signs, or welcome mats
3. Other **[SPECIFY _____]**
4. Did not notice anything about ENERGY STAR

57. How useful has the information you have received about ENERGY STAR homes been? Use a scale from 0 to 10 where 0 is "not useful at all" and 10 is "extremely useful." **[11=DON'T KNOW]**

58. Which of the following websites did you visit when shopping or planning for your home?

1. masssave.com
2. the facebook site of the ENERGY STAR homes program; that is [www.facebook.com/MassEnergyStar Homes](http://www.facebook.com/MassEnergyStarHomes)
3. energystar.gov—the national ENERGY STAR website run by the EPA
4. websites of individual Massachusetts electric or gas utilities or Cape Light Compact
5. Other websites [SPECIFY: _____]
6. No websites visited
7. (Don't know)

59. When did you first become aware of ENERGY STAR homes?

1. One year ago or less
2. One to three years ago
3. Four to five years ago
4. Five to ten years ago
5. More than 10 years ago
6. (Don't know)

60. How do you think the purchase price of an ENERGY STAR home compares to the price of a similar home without the label? Would you say the price of the ENERGY STAR home is:

[READ RESPONSES]

1. A lot lower
2. A little lower
3. About the same
4. A little higher
5. A lot higher
6. (Don't know)

61. How do you think monthly costs of owning an ENERGY STAR home compare to the costs of a similar home without the label? By monthly costs, I mean the combined cost of the mortgage payment and the utility bills. Would you say the monthly costs of the ENERGY STAR home are: **[READ RESPONSES]**

1. A lot lower
2. A little lower
3. About the same
4. A little higher
5. A lot higher
6. (Don't know)

62. How much value for the money do you think an ENERGY STAR home provides compared to a similar home without the label? Would you say an ENERGY STAR home provides: **[READ RESPONSES]**

1. A lot less value for the money
2. A little less value for the money
3. About the same value for the money
4. A little more value for the money
5. A lot more value for the money
6. (Don't know)

63. Are you aware of the Home Energy Ratings System, or HERS, used to rate the efficiency of a newly constructed home?

1. Yes **[CONTINUE]**
2. No **[SKIP TO Q.#65]**
3. (Don't know/refused) **[SKIP TO Q.# 65]**

64. Would you please describe what a HERS rating means? **[PROBE]**

65. Are you aware of the different levels of efficiency that ENERGY STAR homes may achieve?

1. Yes **[GO TO Q.#65a]**
2. No
3. (Don't know)

65a. **[IF Q.#43=1 AND Q.#65=1]** Do you know the Tier or energy efficiency level achieved by your new home and/or what the HERS index was? (multiple response)

1. Yes, the level or tier achieved **[SPECIFY _____]**
2. Yes, the HERS index achieved **[SPECIFY _____]**
3. No, don't know either one
4. (Don't know)

66. **[IF Q.#43=1]** Earlier you said your home was an ENERGY STAR home. Why do you think so? **[PROBE—WHAT HAVE YOU SEEN OR HEARD THAT MAKES YOU THINK SO?]**

67. **[IF Q.#43=2 OR 3]** Earlier you said your home is NOT an ENERGY STAR home or you are not sure. Why do you think that? **[PROBE, THEN SKIP TO Q.#82]**

68. **[IF Q.#43=1]** Does your new home have an ENERGY STAR label?

1. Yes **[CONTINUE]**
2. No **[SKIP TO Q.#70]**
3. (Don't know/refused) **[SKIP TO Q.#70]**

69. **[IF Q.#68=1]** Where is the ENERGY STAR label for your new home posted—that is, where in your house can you see the ENERGY STAR label? **[PROBE; MULTIPLE RESPONSES]**

70.[IF Q.#43 =1] Did you intend to buy or build an ENERGY STAR home when you first started planning to buy or build a new home, or did you decide on an ENERGY STAR home after you started planning?

1. Intended to buy ENERGY STAR home from the beginning
2. Decided to buy ENERGY STAR home after started planning
3. (Don't know)

71.[IF Q.#70=2 OR 3] Did you become aware that your new home is ENERGY STAR before you decided to buy or build it, or after you had already decided to buy or build it?

1. Before decided to buy or build
2. After decided to buy or build
3. (Don't know)

72.[IF Q.#4 EQ 1 OR 2] Who first came up with the idea of building an ENERGY STAR house?

1. You, the home owner
2. The builder
3. The architect
4. Or someone else? [SPECIFY: _____]
5. (Don't know)

73. How important was the ENERGY STAR certification in your decision to buy or build this home instead of another home? Use a scale from 0 to 10, where 0 is "not at all important" and 10 is "extremely important." [99=DON'T KNOW]

74.Since moving into your new ENERGY STAR home, have your utility bills been about what you expected, higher, or lower?

1. As expected
2. Higher
3. Lower
4. (Don't know/refused)

Do you believe your new ENERGY STAR home provides any of the following non-energy benefits over what a newly constructed non ENERGY STAR home would provide? [FOR EACH ITEM RECORD 1. YES, 2. NO, 3. DON'T KNOW]

75. Greater comfort due to fewer drafts and more even heating and cooling
76. Quieter with less outdoor noise
77. Healthier indoor air quality
78. Better resale value
79. Protection against energy price increases

[For each YES in Q.#75-79] Did this non-energy benefit have any influence in your decision to purchase an ENERGY STAR home?

1. Yes
2. No
3. (Don't know)

80. Overall, how satisfied are you with the Massachusetts New Homes with ENERGY STAR Program?

1. Extremely satisfied
2. Satisfied
3. Neither satisfied nor dissatisfied
4. Dissatisfied
5. Extremely dissatisfied
6. (Don't know)

81. **[IF 4 OR 5 TO Q.#80]** Why are you dissatisfied with the program?

82. Starting this year, homes participating in the Massachusetts New Homes with ENERGY STAR Program will be certified into one of three tiers. Tier I will be homes that are at least 15% more energy efficient than the average new home built in Massachusetts. Tier II will be homes that are at least 30% more energy efficient and Tier III will be homes that are at least 45% more energy efficient. The homes participating in the program will no longer have to be certified as ENERGY STAR and have an ENERGY STAR label. However, builders may still choose to have their homes ENERGY STAR certified and labeled. If you were building or shopping for a new home now, how important would it be to you to have the home participate in the Massachusetts New Homes with ENERGY STAR Program?

1. Very important **[GO TO Q.#83]**
2. Somewhat important
3. Nice if it participated, but no big deal
4. Not a factor at all in my decision to buy or build

82a. Would the importance of getting a home that had gone through the Massachusetts New Homes with ENERGY STAR Program be greater for you if the program was still requiring all participating homes be certified and labeled ENERGY STAR homes?

1. Yes
2. No
3. (Don't know)

83. Do you believe homes that go through the program are energy efficient even if they are not certified as ENERGY STAR and have a label? **[READ RESPONSES]**

1. Yes, it doesn't matter if they have a label
2. They are more energy efficient than homes that do not go through the program, but not as efficient as if they had gone through the certification process
3. They are no more efficient than other new homes on the market.
4. (Don't know)

84. Do you happen to remember the name of your builder?
1. Yes [SPECIFY: _____]
 2. [ONLY ALLOW IF Q.#4 EQ 1, 2, OR 7] (Yes, did it myself—I served as my own general contractor)
 3. No

Now I have a few last questions for statistical purposes only.

85. Are you a first-time homebuyer, or did you already own a home before you bought this one?

1. First-time homebuyer
2. Already owned home
3. (Don't know/refused)

86. Including yourself, how many people live in your household most of the year?

1. One
2. Two
3. Three
4. Four
5. Five
6. Six or more
7. None—seasonally occupied
8. (Refused)

87. Approximately how many square feet is your home?

1. Less than 1,500
2. 1,500 – 1,999
3. 2,000 – 2,499
4. 2,500 – 2,999
5. 3,000 – 3,999
6. 4,000 – 4,999
7. 5,000 or more
8. (Don't know/Refused) [ASK Q.#87a; else go to Q.#87b]

87a. [IF Q.#87=8] How many rooms are in your home, not counting bathrooms?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 10 or more
11. (Don't know/refused)

87b. Does your home have central air conditioning?

1. Yes
2. No
3. (Don't know)

88. What is the highest level of education that you have completed? **[READ CATEGORIES]**

1. Less than high school
2. High school graduate
3. Technical or trade school graduate
4. Some college
5. College graduate
6. Some graduate school
7. Graduate degree
8. (Refused)

89. What is your age? Are you . .

1. 18 to 24
2. 25 to 34
3. 35 to 44
4. 45 to 54
5. 55 to 64
6. 65 or over
7. (Refused)

89a. **[IF Q.#89=5, 6, OR 7]** Is your new home in an over-55 community?

1. Yes
2. No
3. (Don't know)

90. How long do you expect to stay in your new home?

1. One year or less
2. Two to three years
3. Four to five years
4. Six to ten years
5. More than ten years
6. (Indefinitely/the rest of my life)
7. (Don't know)

91. What category best describes your total household income in 2010, before taxes?

1. Less than \$35,000
2. \$35,000 to \$49,999
3. \$50,000 to \$74,999
4. \$75,000 to \$99,999
5. \$100,000 to 149,999

6. \$150,000 or more
7. (Refused)

92. **[DO NOT READ]** Sex

1. Female
2. Male

[ONLY ASK Q.#93 IF RESPONDENT IS ON BASELINE LIST]

93. Now I have one last question. The Massachusetts utilities and energy efficiency providers are interested in conducting home visits in order to assess the insulation, heating and cooling equipment, air infiltration, appliances, lighting, and windows installed in homes. We would use this information to learn more about opportunities to save energy in Massachusetts homes.

You will be paid \$150 at the end of the visit for allowing an energy expert to check the energy features of your home. If your home has central air conditioning, you may be eligible for a more detailed assessment of your home. Participants in this component will receive an additional \$50. The visits can be scheduled at your convenience. They last from about 2 to 4 hours. Information collected and analyzed by the study will be aggregated, and specific information about your home will not be shared with anyone—including the sponsors of the study.

Could we include you on our list of willing participants?

1. Yes [Go to instructions for YES]
2. No **[GO TO Q93a]**
3. (Can't decide now—call back later) [Go to instructions for CAN'T DECIDE]

Q. 93a. OK, you don't have to make a decision now; we could have one of the firms hired to do on-sites call you later in the summer if they still need to add your home, and they can answer any questions you may have; you would be under no obligation to agree to a visit.

1. OK to call them later
2. Do not want to be called later

[IF YES TO Q.#93] Great, you may receive a call from one of the firms hired to do the on-sites in the next couple of months to schedule a visit.

[IF CAN'T DECIDE TO Q.#93] That's OK; you may receive a call from one of the firms hired to do the on-sites in the next couple of months and they can answer any questions you may have.

[IF RESPONDENT ASKS, PROVIDE APPROPRIATE CONTACT INFORMATION FOR ELECTRIC AND/OR GAS UTILITY AND/OR CAPE LIGHT COMPACT.]

Thank you very much!