

## **ENERGY STAR Homes Program – Nonparticipating Homeowner Survey**

The purpose of the Nonparticipating Homeowner Survey was to gather information from homeowners occupying homes that were constructed during 2006 or 2007, but were not certified by the NYSERDA ENERGY STAR Homes Program (ESH). The survey was designed by GDS Associates to contribute to the Market Characterization and Assessment evaluation of the ESLH program. The survey was managed by APPRISE Incorporated. Interviews were conducted by Braun Research.

### **Sample**

#### *Target Population*

The target population for the survey was occupants of newly constructed homes that were not certified by the ESH program. The targeted homes were those certified during the period from 1/1/2006 to 12/31/2007. The target survey respondent was the purchaser of a home that was constructed during the target analysis period. The questionnaire includes screener questions to confirm eligibility for the survey; it established that the home was newly constructed, that the home was purchased after 1/1/2006, that the respondent was involved in the purchase decision, and the home was not an ENERGY STAR Home.

#### *Sample Frame*

The sample frame was a file of 2,793 individuals who were determined by a financial service provider to be purchasers of newly constructed homes during 2006 and 2007. The sample frame was purchased from Genesys Sampling. Since there are about 20,000 new homes built in New York State each year, the sample frame has only a 5% to 10% coverage rate. However, since an RDD screening approach to this survey would have been prohibitively expensive, it was determined that this frame would be acceptable. Since the same sample frame was used for the 2006 ESH Study, the results from this survey are consistent with those from 2006.

#### *Sample Selection*

The sample frame was stratified into “Upstate” and “Downstate” homes. “Downstate” homes are those that with FIPS codes that indicate that there are located in New York City or Westchester County. A total of 777 records were coded as “Downstate.” All of the remaining records were coded as “Upstate.” All records with the “Downstate” designation were included in the sample to give NYSERDA more information about buyers in the New York City area. A simple random sample of 1,250 records from the “Upstate” stratum was selected.

**Table 1 – Participating Homeowner Sample Stratification**

<b>Stratum</b>	<b>Number of Sample Frame Records</b>	<b>Percent of Sample Frame Records</b>
Upstate	2,016	72%
Downstate	777	28%
TOTAL	2,793	100%

The survey budget allowed for 150 interviews. The analysis plan proposed to oversample the “Downstate” stratum. However, a significant percentage of the sample frame units in the NYC area were ineligible (were in buildings with 5 or more units) and response rates are much lower for the NYC area. Even with a larger sample in the Downstate area, we were able to complete only 24 interviews in the “Downstate” stratum. The sample of Downstate nonparticipating homeowners cannot be analyzed independently of the Upstate population. Table 2 furnishes information on the number of completed interviews and the confidence interval for the overall sample.

**Table 2 – Participating Homeowner Survey Completed Interviews**

<b>Stratum</b>	<b>Population</b>	<b>Number of Completed Interviews</b>	<b>90% Confidence Interval</b>
TOTAL	Large	150	+/- 7%

## **Data Collection**

### *Overview of Data Collection Procedures*

The Nonparticipating Homeowner Survey was administered as a telephone interview with the NYSEDA project contact. Sampled contacts were mailed an advance letter from NYSEDA and one from APPRISE notifying them of the data collection effort and describing the study. Interviewers from Braun Research conducted the interviews using a computer-assisted telephone interview (CATI) survey instrument.

### *Survey Instrument*

The survey instrument was designed to collect information on key performance indicators identified for the ESLH in the Program Theory and Logic Model. One objective of the survey instrument was to update the time series measurements of market indicators obtained from previous surveys. So, it was important to ensure that questions were consistent with the prior surveys. However, the survey also was addressing some new issues of interest to NYSEDA program staff. Those questions, in particular,

needed to be pretested to ensure that they collected the required information and used clear and concise language. The survey was pretested; the pretests found that the language for certain questions needed to be improved or shortened, and many skip instructions required revision.

*Survey Administration*

Interviewers called homeowners between 9 am and 9 pm on weekdays and weekends. If they reached the household’s voice mail, they left a message on first contact. After the first contact, they left a message every other day. The study was in the field for three weeks. Attempts were made with each project contact at least once per day during the field period. Once the target number of interviews for a stratum was completed, interviewing was discontinued for that stratum. Survey administration averaged 13.5 minutes per completed interview. Table 3 shows the final disposition of the sample. The estimated response rate was 24%.

**Table 3 – Participating Homeowner Survey Sample Disposition**

Disposition		Number	Percent
Complete	Complete	150	7%
	Partial	17	1%
Contacted	Refused	273	13%
	Not Completed	1,033	53%
Not Contacted	Quota Met	0	0%
Excluded	Duplicate	0	0%
	Homeowner no longer available	0	0%
	Information not available for homeowner	305	12%
	Not Eligible	249	14%
TOTAL		2,027	100%

**Data Processing**

*Coding*

The survey included many “field-coded” questions. In these questions, the respondent was asked an open-ended question. The interviewer had the choice of coding the response as one (or more, for some questions) of a number of pre-coded categories (coded from the open-ended responses for the prior surveys), or coding the response as “Other” and entering a text string to summarize the response. For each applicable question, staff reviewed each “Other” response and then selected one of the pre-coded responses or made the response eligible for development of a new code. After reviewing all

questionnaires, text responses were grouped into categories. If a group represented at least 5% of responses (seven or more), a new code was created. If there were less than seven responses, it was left as "Other."

#### *Data Processing*

The survey data were checked for consistency with the CATI survey instrument. The survey data were combined with the sample frame data. A number of data file formats were developed, including SAS, SPSS, Stata, and Excel. All files were labeled with variable labels and value labels.

#### *Weights*

There were 24 "Downstate" interviews, representing about 16% of the total survey file of 150 interviews. In the sample frame, "Downstate" records were about 29% of the total file. However, a greater percentage of the "Downstate" sample cases were ineligible for the survey. Given the uncertainty regarding the population of eligible units, it was not appropriate to develop weights for this survey.