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HOMEOWNERS' DEMAND FOR

HOME INSULATION

Conducted for:

U.S. DEPARTMENT OF ENERGY

Office of Conservation and
Solar Applications

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by:

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TABLE OF CONTENTS

	<u>Page</u>
SUMMARY OF PRINCIPAL RESULTS	1
INTRODUCTION	6
<u>SECTION I - AUDIT OF CURRENT INSULATION AND CURRENT INSULATION NEEDS</u>	8
Current Insulation	9
Need For Additional Insulation	11
Type Of Insulation Planning To Add	13
Summary	16
<u>SECTION II - EXPERIENCE OF THOSE WHO HAVE ADDED INSULATION IN THE PAST 12 MONTHS</u>	17
Cost Of Insulating Attic	18
Type Of Insulation And Type Of Material Used	19
Amount Of Insulation	20
When Insulation Was Added	21
Extent Of Attic Insulation	22
Person Who Added Attic Insulation	23
Problems Encountered In Attic Insulation	24
Satisfaction With Installation Of Attic Insulation	24
<u>SECTION III - DESCRIPTION OF ANTICIPATED ATTIC INSULATION</u>	25
Cost And Time Anticipated To Insulate Attic	26
Type Of Insulation Anticipate Purchasing	27
Type Of Material Anticipate Purchasing	28
Certainty Of Adding Attic Insulation	29
Expected Cost Savings From Added Insulation	30

	<u>Page</u>
<u>SECTION IV - KNOWLEDGE OF HOME INSULATION AND SOURCES OF INFORMATION ON HOME INSULATION</u>	31
Homeowners Knowledge About How To Insulate Attic	32
Knowledge Of Insulation	33
Where To Buy Insulation	34
Ability To Find Contractors	35
Expected Price Of Insulation	36
Delays In Getting Supplies	37
Sources Of Information About Home Insulation	38
Trust In Various Sources About Insulation Needs	39
 <u>SECTION V - ATTITUDE OF HOMEOWNERS TOWARD THE ENERGY SITUATION</u>	 40
Attitude Toward The Seriousness Of The Energy Crisis	41
Attitudes Towards Energy Conservation	45
 <u>SECTION VI - THE LIKELY IMPACT OF FEDERAL FINANCIAL AID ON THE DECISION TO INSULATE</u>	 47
Awareness Of Government Financial Aid	48
The Effect Of A Tax Credit On Attic Insulation	49
The Effect Of A Tax Credit On Buying Storm Windows	51
 <u>SECTION VII - INHIBITING FACTORS IN THE DECISION TO ADD HOME INSULATION</u>	 53
Sincerity Of Intention To Insulate	54
The Effect Of Shortages Of Insulating Material	56
Attitude Toward The Future Cost Of Home Insulation	57

SECTION VIII - LIKELIHOOD OF PURCHASING HOME INSULATION: 58
THE CASE OF ATTICS

Likelihood of Purchasing Insulation	59
Likelihood of Adding Attic Insulation	61
Likelihood of Purchasing Attic Insulation Analyzed by Demographic Characteristics	62
Likelihood of Adding Attic Insulation Analyzed by Attitude Toward The Energy Crisis	64
The Impact of Cost Factors on The Decision To Insulate	65
Perceived Impact of Additional Insulation on Fuel Bills	72
Attitude Toward The Future Cost of Home Heating	73
Likelihood of Adding Attic Insulation This Winter Vs. Last Winter	75
AID Analysis of Plans To Insulate Attic Before Next Summer	76

SECTION IX - ESTIMATE OF FUTURE INSULATING BEHAVIOR 83

Estimate of Future Insulating Behavior	84
Estimation of the Number of Homeowners Who Will Add Attic Insulation Before Next Summer	84

TECHNICAL APPENDICES	87
Composition of the Sample	88
Design of the Sample	90
Sampling Tolerances	92

QUESTIONNAIRE	95
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SUMMARY OF PRINCIPAL RESULTS

SUMMARY OF PRINCIPAL RESULTS

1. Current Insulation

A substantial majority of the nation's homeowners now have the principal types of insulation.

- Three of every four have attic insulation and two out of every three have wall insulation.
- About seven out of ten have at least some storm doors and windows.
- A majority have weather stripping and caulking around their doors and windows.

Roughly one of every four is lacking each of these types of insulation. Significant numbers of homeowners have added insulation in the last year.

- One in six have added attic insulation.
- About one of every ten have added wall insulation, storm doors and windows.

2. Insulation Needs

Many homeowners feel they need insulation, and many who have insulation feel they need more.

- Thirty-six percent reported that more attic insulation is needed.
- One-third of those who already have attic insulation think more is needed.
- Four in ten of those without attic insulation think they need it.
- About one of every five feel that storm doors and windows are needed.
- Weather stripping of doors and windows is thought to be needed by one of every four.

Many homeowners plan additional insulation (this will be described in detail in a later section).

3. Experience of Those Who Have Added Attic Insulation in Past 12 Months

One-sixth of all homeowners have added attic insulation in the last year.

- The median price paid for this insulation was in the range of \$150-\$199.
- The types of insulation installed most often were, in about equal proportions, loose fill, batt and blanket.
- A majority of about two-thirds used fiberglass.
- The largest number put in this insulation during the summer months.
- Three out of four insulated the entire attic (not part).
- About one-third employed a contractor and the remainder did the work themselves or with a member of the family.
- One out of ten had problems in connection with the installation.
- About four of every five were satisfied with the job done.

4. Plans for Attic Insulation

Seventeen percent of all homeowners plan to insulate their attics before next summer.

- Two out of three plan to do the work all at once rather than over a period of time.
- One in ten will take out a loan for the purpose.
- Roughly equal proportions plan to use batt, blanket and loose fill insulation.
- About half plan to use fiberglass; one third are uncertain about the material to be used.
- Most expect some savings in fuel bills, but many of them are uncertain about the amount of savings.

5. Knowledge About Insulation

In most cases, those who are planning to install attic insulation feel they have the necessary information to get the job done. One exception to this is in the area of cost.

- Four out of five say they know what types of insulation to buy, from whom to buy it and how to install it.
- However only half know what would be a fair price for the insulation.

- A large majority of those who are planning to have a contractor do the work think they know where to find the names of people to do the work and that they know how to judge the work to be done.
- Only half feel that they know what would be a fair price to pay the contractor.
- One-third anticipate a cost of \$500 or more to have a contractor do the work.
- About half of these people have already talked to a contractor.

6. Sources of Reliable Information About Home Insulation

Almost half of all homeowners, and one-third of those planning attic insulation, do not feel they know a reliable source of information about home insulation.

- Friends and magazine and newspaper articles are the sources cited most often.
- Only about half of all homeowners would trust the government to tell them how much insulation is needed.
- Gas and Electric utility companies would also be trusted by about half of the homeowners.

7. Attitudes Toward the Energy Situation

No more than half of all homeowners feel there is an "energy crisis."

- Only about half the homeowners believe there is a real energy problem.
- About half anticipate a serious energy shortage in the next five years, and two-thirds think that there will be such a shortage within ten years.
- One out of every five is worried about natural gas shortages.
- One-third are concerned that foreign oil producers might stop shipments of oil to this country.

8. The Likely Impact of Federal Financial Aid On The Decision To Insulate

The availability of Federal financial aid would have a significant impact on homeowners' decision to add insulation.

- Among those who think Federal financial aid is currently available, fourteen percent report that this is a factor in whether or not they will add insulation.
- Many more homeowners are likely to add attic insulation with a twenty percent tax credit than when a tax credit is not mentioned.
- Almost twice as many are very or fairly likely to add storm windows with a twenty percent tax credit (13%) as without the tax credit (8%).

9. Inhibiting Factors In the Decision To Add Home Insulation

Although many homeowners report that they plan to add some type of home insulation, there are many factors that may preclude the actual addition of insulation.

- One in five feel it would be too much trouble to put in attic insulation.
- Half feel they have more important things to spend their money on this winter than attic insulation.
- Roughly half of those who tried to purchase insulation material found the material they needed was not available.
- Many feel the price of insulation has risen and/or will continue to rise faster than the price of other household items.

10. Likelihood of Purchasing Home Insulation: The Case of Attics

Roughly one-third of all homeowners perceive a need for attic insulation. Among this group fourteen percent are absolutely certain that they will add the needed attic insulation before next summer.

- Likelihood of adding attic insulation is not related to attitude toward the energy crisis.
- Likelihood of adding attic insulation is moderately related to cost factors.
- An AID analysis of likelihood of adding attic insulation indicates that among those who need attic insulation, the belief that Federal financial aid is available is the strongest predictor of plans to add home insulation.

11. Estimate of Future Insulating Behavior

Based on the results of the survey, it is projected that between 1,400,000 and 2,300,000 homeowners will attempt to purchase attic insulation before next summer. Of these, many may find that the material they need is not available. Others may not ultimately purchase the insulation either because they find that they cannot afford it or because they do not need it.

INTRODUCTION

Objectives of the Study

This is a report on a survey conducted for the U.S. Department of Energy to provide guidance based on the views and experience of a national sample of homeowners about the insulation of their homes. The specific objectives of the study were to investigate:

1. Plans for installing home insulation with emphasis on attic insulation;
2. How many homes now have various types of insulation;
3. Recent experience in obtaining attic insulation--its cost, material used, when installed, whether installed by the homeowner or a contractor, etc.;
4. The kinds of insulation thought to be needed - attic insulation, wall insulation, storm doors, storm windows, etc.;
5. Whether homeowners planning attic insulation feel that they have the necessary information to do the work themselves or if they feel they know enough to make the necessary arrangements with a contractor;
6. The effect of higher fuel costs on likelihood of installing attic insulation;
7. Shortages of insulating material;
8. What sources of information are relied on when planning attic insulation;
9. Attitudes toward having utility companies install insulation to be paid for by means of utility bills;
10. How much trust homeowners have in the advice of government, utility companies, insulation manufactures, insulation installers, and retail stores about how much insulation is needed;
11. The likely effect of a tax credit on plans to insulate the attic;
12. Concern about energy shortages.

Design of the Research

The survey was conducted by telephone with a national sample of 1,012 homeowners between January 12 and January 22, 1978. Interviews were made with the male head of household in households with a male head and with the female head of household where there were only females. Interviewing took place during evening hours and on weekends when working people would be more likely to be found at home. Additional information about the design and composition of the sample will be found in the Technical Appendices at the end of the report. Tables of sampling tolerances to provide guidance about sampling error and a copy of the questionnaire will also be found in the Technical Appendices.

When reading the report it should be kept in mind that the sample is based on homeowners who have telephones. There are about 76,000,000 households in the United States. Of these about two-thirds or 51,000,000 are owner occupied and among those which are owner occupied about ninety percent or 46,000,000 have telephones. Any projections or estimates made from the data presented then should be made from these 46,000,000 households and other households which are occupied by renters are not included.

Region

The regional results reported are based on interviews in the states listed below:

- East: Maine, New Hampshire, Rhode Island, Connecticut, Vermont, Massachusetts, New York, New Jersey, Pennsylvania, West Virginia, Delaware, Maryland, District of Columbia
- Midwest: Ohio, Indiana, Illinois, Michigan, Minnesota, Wisconsin, Iowa, North Dakota, South Dakota, Kansas, Nebraska, Missouri
- South: Kentucky, Tennessee, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Texas, Arkansas, Oklahoma, Louisiana
- West: Arizona, New Mexico, Colorado, Nevada, Montana, Idaho, Wyoming, Utah, California, Washington, Oregon, Alaska, Hawaii

SECTION I

Audit of Current Insulation and
Current Insulation Needs

Current Insulation

The questions: *Which of the following types of material do you now have in your home?*

Which of the following kinds of materials have you added to your home during the last twelve months?

<u>Type of Insulation</u>	<u>All Homeowners</u>		
	<u>Currently Have</u> %	<u>Do Not Currently Have*</u> %	<u>Have Added in Past 12 Months</u> %
Attic/Crawl Space	76	19	17
Walls	64	28	11
Windows			
Storms on all	57		
Storms on all or some	70	29	10
Plastic sheeting on all	3		
Plastic sheeting on some or all	16	79	10
Doors			
Storms on all	63		
Storms on all or some	74	25	8
Weather stripping on all	64		
Weather stripping on all or some	81	17	22
Doors and Windows			
Caulking on all	55		
Caulking on all or some	72	25	22
Number of Interviews	(1012)	(1012)	(1012)

* The proportion who were not certain whether they have each type of insulation are not included in this analysis. With the addition of this "don't know" group, the "currently have" and "do not currently have" figures would sum to 100% in each category.

A large majority of homeowners report that they currently have attic insulation (76%), insulation in their walls (64%), storms on all or some windows (70%), storms on all or some doors (74%), weather stripping on all or some doors (81%), and caulking on all or some doors (72%). However, although large majorities report having some insulation in most parts of the home, overall roughly one in four do not report that they have each type of insulation. In short, there is a substantial proportion of homeowners who apparently lack even minimal insulation.

At the same time it should be emphasized that these are approximate figures. Many homeowners may underestimate the amount of insulation in their home as a result of the current ad campaigns making such claims as "We can save you money by adding more insulation to your home."

It is interesting to note that a substantial proportion report that they added insulation to their home in the past twelve months (in total, roughly two out of three homeowners report having added some type of insulation in the past year) indicating that adequate insulation is apparently a concern among homeowners. The largest proportions report that they added attic insulation (17%), insulation to the walls (11%) and storm windows (10%), three relatively expensive types of insulation. Almost one in four also report having added weather stripping to doors (22%) and caulking to doors and windows (22%).

Need for Additional Insulation

The question: *Which of the following kinds of materials do you think your home needs or needs more of?*

<u>Type of Insulation</u>	<u>All Homeowners</u>	
	<u>Currently Have</u> %	<u>Need or Need More of</u> %
Attic/Crawl Space	76	36
Walls	64	29
Storm Windows	70*	22
Storm Doors	74*	16
Weather Stripping	81*	24
Caulking on Doors and Windows	72*	21
Plastic Sheeting on Windows	16*	7

The greatest perceived insulation need is in the area of attic insulation: thirty-six percent of all home owners report that they need or need more attic insulation. Considerably fewer, but still a sizeable proportion, feel they need insulation in their walls (29%), or that they need storm windows (22%), storm doors (16%), weather stripping (24%) or caulking on doors and windows (21%).

Taking into consideration the fact that roughly three out of four homeowners report that they already have attic insulation, it is interesting to note the large proportion who feel they need more insulation. In fact, among those who report that they have attic insulation, thirty-three percent also report that they need more attic insulation. From this we might infer that the public is aware of the potentially large amount of heat loss due to insufficient attic insulation.

* Figures presented include storm windows or doors on all or some windows or doors.

Less encouraging is the finding that so many (almost one in four) feel they need or need more weather stripping or caulking. While this type of material is not likely to stop as much heat loss as insufficient wall or attic insulation, it is relatively inexpensive and easy to add weather stripping or caulking and it is certainly cost effective. Again, it is possible that many have not added weather stripping or caulking precisely because they feel it will have little effect on heat loss. However, some homeowners may be unaware of the relative cost or ease involved in the addition of this type of insulation.

Sizeable proportions of both those who have and those who do not currently have each type of insulation report that they need or need more insulation. For example, among those without attic insulation about four in ten feel they need insulation. Among those who have attic insulation about one-third feel they need more. Moreover, about half of those with attic insulation feel that the addition of more insulation would save home heating fuel, while among those without attic insulation two out of three recognize that additional insulation would save fuel. Of those with wall insulation, about one homeowner in five thinks that more wall insulation is needed while half of those without wall insulation think they need wall insulation. About half (55%) of the homeowners with storm windows on some of their windows think they need more storm windows and a similar proportion (45%) of those without any storm windows think they need storm windows. In short, not only do substantial proportions report having added more attic insulation in the past year, but there is reason to believe that many will continue to add insulation as fuel prices continue to escalate.

These results are important for two reasons. First, it would indicate that twelve months ago a substantial number of homes were in need of insulation. However, in determining the degree of that need, it should be pointed out that in some cases insulation may have been added that was not necessary. Second, homeowners are apparently reacting to the energy crisis and to discussions of the need to cut fuel consumption (and the cost of heating the home) by adding more insulation to their homes. Moreover, this reaction involved not merely making inexpensive changes like adding caulking or weather stripping, but in many instances involved an investment of more than \$100.00. (A discussion of the cost of insulating can be found on page 16).

Type of Insulation Planning to Add

The question: *What will you do, if anything, to make it less expensive to heat your home this winter?*

Which of the following kinds of material are you planning to add between now and next summer?

Respondents were read a list.

<u>Type of Insulation</u>	<u>All Homeowners</u>		
	<u>Which do You</u>	<u>What Will You</u>	<u>Which of The</u>
	<u>Need/Need</u>	<u>Do To Cut</u>	<u>Following Planning</u>
	<u>More of</u>	<u>Heating Costs</u>	<u>To Add</u>
	<u>%</u>	<u>%</u>	<u>%</u>
Attic/Crawl Space	36	14	17
Walls	29	6	7
Storm Windows	22	5	8
Storm Doors	16	1	5
Caulking	21	3	8
Weather Stripping	24	4	9
Plastic Sheeting on Windows	7	3	2
Service furnace	NA	1	NA
Clock Thermostat	NA	*	NA
Lower Thermostat	NA	18	NA
Something Else	NA	10	2
Nothing		46	60
Don't Know		6	3
Number of Interviews	(1012)	(1012)	(1012)

When homeowners are asked to mention what, if anything, they would do to make it less expensive to heat their homes, about one in three spontaneously mentioned adding some type of insulation. This would indicate that on an unaided basis many homeowners are immediately aware of the fact that they might be able to reduce their heating costs through the addition of more insulation.

The largest proportion (14%) spontaneously mention that they will insulate their attic or crawl space, while only six percent or fewer mention other types of insulation. In addition, eighteen percent say they will turn the thermostat down, one percent will have their furnace serviced and ten percent mention some other type of heat saving measure.

Among the total sample, nine percent report both that they need attic insulation and that they plan to add attic insulation this winter. Of this nine percent, three percent are absolutely certain that they will add attic insulation and four percent say that it is only somewhat likely that they will add the insulation. In other words, although thirty six percent report that they need or need more attic insulation, only about one fourth of this group spontaneously mention that they will add the needed insulation this winter.

When homeowners were read a list of types of insulation and asked which they were planning to add before next summer, somewhat larger proportions mentioned each type of insulation than when asked to respond spontaneously to the question on cutting heating costs. Again, the largest proportion (17%) said they would add attic insulation. However, when probed as to how certain they were to add the attic insulation, only six percent said they were absolutely certain. An additional seven percent said they were fairly certain and the remaining four percent were not certain.

In addition, nine percent said they would add weather stripping, eight percent said they would add caulking, eight percent said they

would add storm windows, seven percent said they would insulate their walls and five percent said they would add storm doors.

Fifteen percent of all homeowners report that they both need attic insulation and that they are planning to add attic insulation before next summer. Of this group, five percent are absolutely certain that they will add the insulation while an additional seven percent are only fairly certain.

If we compare the results of the proportion who need more of each type of insulation with the proportion who are planning to add each type of insulation before next summer, in each case there is a perceived need to insulate which the homeowner does not anticipate filling, at least not before this summer. For example, in the case of attic insulation, thirty-six percent of all homeowners feel they need or need more attic insulation, yet less than half of that number (17%) are planning to add attic insulation before next summer.

The only demographic characteristic that is related to the intention to add more home insulation is annual household income: the lowest income group (those with an annual household income of \$5,000 or less) are less likely than others to plan to add each type of insulation.

Summary

The following table summarizes the results of this section. Several conclusions might be inferred from this table:

- although most homeowners report that they currently have most types of insulation, many are aware of the need for more adequate insulation. This is indicated by the relatively large proportions who have added insulation in the past year and who plan to add more insulation in the coming months.
- despite the perceived need for more insulation, most homeowners do not anticipate adding the needed insulation before next summer.
- overall, those who report having added insulation in the past twelve months are more likely than the sample as a whole to report that they tend to add more insulation. For example, while eight percent of all homeowners plan to add storm windows, almost one in five of those who added storm windows in the past twelve months intend to add additional storm windows. On the other hand, fifty-eight percent of those who did not add any insulation in the past year do not plan to add any insulation this winter. However, among the sample as a whole forty-six percent report that they do not plan to add any insulation this winter.

<u>Type of Insulation</u>	<u>All Homeowners</u>				
	<u>Insulation</u>	<u>Insulation</u>	<u>Which Do</u>	<u>What Will</u>	<u>Which of</u>
	<u>Now</u>	<u>Have</u>	<u>You Need/</u>	<u>You Do To</u>	<u>The Follow-</u>
	<u>Have</u>	<u>Added</u>	<u>Need More</u>	<u>Cut Heating</u>	<u>ing Planning</u>
	<u>%</u>	<u>%</u>	<u>of</u>	<u>Costs</u>	<u>To Add</u>
Attic/Crawl Space	76	17	36	14	17
Walls	64	11	29	6	7
Storm Windows	57*	10	22	5	8
Storm Doors	63*	8	16	1	5
Caulking	55*	22	21	3	8
Weather Stripping	64*	22	24	4	9
Plastic Sheeting on Windows	3*	10	7	3	2
Number of Interviews	(1012)	(1012)	(1012)	(1012)	(1012)

* Now have all windows/doors. An additional proportion (between 11% and 25%) have each type of insulation on some windows/doors.

SECTION II

Experience of Those Who Have Added
Attic Insulation In The Past
12 Months

Cost of Insulating Attic

The following series of questions regarding attic insulation was asked only of those respondents who indicated that they had added attic insulation in the past twelve months.

The question: *What was the cost of insulating your attic floor?*

The median average price paid for attic insulation in the past twelve months was in the range of \$150.00 - \$199.00. Of those who could recall the price of attic insulation, the largest proportion (25%) reported that the cost ranged from \$50.00 to \$149.00. On the other hand, relatively few (12% of the total sample) reported a cost of \$350.00 or more. About one in three (31%) could not recall the cost of attic insulation.

<u>Cost</u>	<u>All Who Insulated Attic In Past 12 Months</u>
	<u>%</u>
Less than \$50	8
\$ 50-\$ 99	13
\$100-\$149	12
\$150-\$199	6
\$200-\$249	7
\$250-\$299	4
\$300-\$349	7
\$350-\$399	1
\$400 or more	11
Don't know	<u>31</u>
Total	100
Number of Interviews	(181)

Type of Insulation and Type of Material Used

The question: *What type of insulation was used?*

Among those who insulated their attic in the past twelve months, roughly equal proportions report having used loose fill (32%), batt (26%) and blanket (25%) insulation. Relatively few (4%) report having used foam insulation. One out of ten could not recall the type of insulation.

<u>Type of Attic Insulation</u>	<u>All Who Insulated Attic In Past 12 Months</u> %
Loose fill	32
Batt	26
Blanket	25
Foam	4
Other	3
Don't know	<u>10</u>
Total	100
Number of Interviews	(181)

The question: *What material was used?*

In most instances those who insulated their attics in the past twelve months report having used fiberglass insulation. A considerably smaller proportion report having used cellulose (13%), mineral wool (7%), or foam (4%).

<u>Type of Material</u>	<u>All Who Insulated Attic In Past 12 Months</u> %
Fiberglass	63
Cellulose	13
Mineral Wool	7
Foam	4
Other	4
Don't know	<u>9</u>
Total	100
Number of Interviews	(181)

Amount of Insulation

The question: *How deep was the new insulation that was put in?*

Relatively few (6%) report adding less than three inches of insulation to their attic. Roughly equal proportions report adding three to four inches (31%), five to six inches (30%) or seven or more inches (25%). The remaining eight percent could not recall the amount of insulation.

<u>Depth of New Insulation</u>	All Who Added Attic Insulation In the Past 12 Months
	<u>%</u>
2 inches or less	6
3 - 4 inches	31
5 - 6 inches	30
7 inches or more	25
Don't know	<u>8</u>
Total	100
Number of Interviews	(181)

When Insulation Was Added

The question: *In which month was the insulation put in?*

Among those who insulated their attic in the past twelve months, the largest proportion (32%) report that they added this insulation during the summer months: June through September. Roughly equal proportions report that they added attic insulation in the winter months (16%), spring months (14%) and fall months (15%). Almost one in four (23%) could not recall the month in which they added the attic insulation.

<u>Month</u>		<u>All Who Insulated Attic</u> <u>In Past 12 Months</u>
		<u>%</u>
1976	November	4
	December	2
1977	January	8
	February	2
	March	3
	April	6
	May	5
	June	9
	July	7
	August	5
	September	11
	October	6
	November	6
	December	2
1978	January	1
	Don't know	<u>23</u>
	Total	100
	Number of Interviews	(181)
<u>Months Grouped By Seasons</u>		
	Nov. - Feb.	16
	March - May	14
	June - Sept.	32
	Oct. - Jan.	15
	Don't know	<u>23</u>
	Total	100

Extent of Attic Insulation

The question: *Was it the whole attic or only part?*

In most cases (73%), homeowners report that they insulated their entire attic. One in five (20%) insulated only part of their attics.

<u>Extent of Insulation</u>	<u>All Who Insulated Attic In Past 12 Months</u>
	<u>%</u>
Whole attic	73
Part of attic	20
Don't know	<u>7</u>
Total	100
Number of Interviews	(181)

Person Who Added Attic Insulation

The question: *Did you, another member of your family, or someone you hired put the insulation in your attic floor or crawl space?*

In most cases (65%) the respondent or a family member added the attic insulation. One in three (34%) report that they hired someone to install the insulation.

<u>Person Who Added Insulation</u>	<u>All Who Insulated Attic In Past 12 Months</u> %
Self	54
Family member	11
Someone hired	34
Don't know	<u>6</u>
Total	105*
Number of Interviews	(181)

* Total exceeds 100% due to multiple responses.

Problems Encountered In Attic Insulation

The question: *Did you have any problems when the insulation was put in?*

An overwhelming majority (83%) report that they did not encounter any problems when attic insulation was installed. Only one in ten (11%) report having had problems.

<u>Problems Encountered</u>	<u>All Who Added Attic Insulation In Past 12 Months</u> %
Yes	11
No	83
Don't know	<u>6</u>
Total	100
Number of Interviews	(181)

The small group who had problems were asked: *"What were they?"* No one problem was encountered by more than a person or two. Some examples of answers were: *"Film of dust throughout the house", "To get into the far corners", "Rough to work with - irritating to throat", "Had to go under sub-flooring", "Batts had a tendency to crumble when placing them in the attic".*

Satisfaction With Installation of Attic Insulation

The question: *Are you satisfied with the job or not?*

Virtually the same proportion report that they were satisfied with their attic insulation (82%) as report not having encountered any problems with installation in the previous question (82%). Only nine percent were not satisfied with the installation job.

<u>Satisfaction</u>	<u>All Who Insulated Attic In Past 12 Months</u> %
Satisfied	82
Not satisfied	9
Not certain	<u>9</u>
Total	100
Number of Interviews	(181)

SECTION III

Description of
Anticipated Attic Insulation

Cost and Time Anticipated to Insulate Attic

All those who plan to add attic insulation between now and next summer were asked the following series of questions.

The questions: *Do you think you will do the attic insulating all at once or do it over a period of time?*

Do you expect to take out a loan to pay for this attic insulation, or pay for it with your own available funds?

Most homeowners anticipate insulating their attic all at once (69%) and paying for the insulation with available funds (71%). However, sizeable proportions feel they will have to insulate over a period of time (16%) and are uncertain how they will pay for the attic insulation (18%) or feel they will have to take out a loan to pay for the insulation (11%). In sum, these tables seem to indicate that while many would like to insulate their attics, roughly one in six of those who plan to insulate anticipate having some financial difficulties in affording the insulation.

All Who Plan to Add Attic Insulation Before Next Summer

<u>Add Insulation All At Once or Over Time</u>		<u>How Attic Insulation Will Be Paid For</u>	
All at once	69	Take out a loan	11
Over a period of time	16	Pay out funds	71
Don't know	<u>15</u>	Don't know	<u>18</u>
Total	100	Total	100
Number of Interviews (178)		Number of Interviews (178)	

Type of Insulation Anticipate Purchasing

The question: *What type of attic insulation are you interested in buying?*

More homeowners anticipate purchasing the blanket type of insulation (26%) than the other types of insulation; roughly one in five anticipate purchasing the batt (20%) or loose fill (19%) types of insulation. Only six percent express an interest in foam insulation. A large proportion (28%) are not certain what type of attic insulation they will add despite the fact that they plan to add the insulation within six months of the interview.

<u>Type of Insulation</u>	<u>All Who Plan To Add Attic Insulation Before Next Summer</u>	<u>All Who Added Attic Insulation In Past 12 Months</u>
	<u>Type of Insulation Plan to Add</u>	<u>Type of Insulation That Was Added</u>
Batt	20	26
Blanket	26	25
Loose Fill	19	32
Foam	6	4
Other	1	3
Don't know	28	10
Total	100	100
Number of Interviews	(178)	(181)

If we compare the type of attic insulating material that homeowners anticipate purchasing with the type of materials already used, overall the responses tend to be consistent. As would be expected, the "don't know" figure is considerably higher among those who have not yet added the insulation. Taking this into consideration, there is a slight tendency for more homeowners to report having used the loose fill and batt types of insulation than to anticipate using these types of insulation. Among both groups, the smallest proportion indicate an interest in the foam type of insulation.

Type of Material Anticipate Purchasing

The question: *What material are you interested in buying?*

Almost half of the homeowners surveyed (47%) anticipate purchasing fiberglass insulation, while one in three (33%) do not know what type of material they will purchase. This is consistent with our earlier finding that most homeowners who insulated their attics in the past 12 months (63%) report having added fiberglass insulation.

<u>Type of Material</u>	<u>All Who Plan To Add Attic Insulation Before Next Summer</u>	<u>All Who Added Attic Insulation in Past 12 Months</u>
	<u>Type of Material Plan to Add</u>	<u>Type of Material That Was Added</u>
Fiberglass	47	63
Cellulose	7	13
Mineral Wool	6	7
Foam	6	4
Other	1	4
Don't know	<u>33</u>	<u>9</u>
Total	100	100
Number of Interviews	(178)	(181)

The large "Don't Know" figures in response to the two questions on type of insulating materials that homeowners anticipate using indicate that even among homeowners who intend to insulate in the near future there is a great deal of uncertainty or perhaps lack of knowledge, concerning insulation materials.

Certainty of Adding Attic Insulation

The question: *How certain are you that you will add the attic insulation you mentioned between now and next summer, absolutely certain, fairly certain, or not certain?*

When those who initially stated that they planned to insulate their attics before next summer were probed as to just how certain they were to insulate, it became evident that many were in fact not very certain. As the results in the table below indicate, only one third (34%) replied that they were absolutely certain with an additional forty-one percent saying that they were fairly certain to add the attic insulation. If we repercentage this based on the total sample we find that six percent of all homeowners surveyed are absolutely certain to add attic insulation before next summer, and seven percent are fairly certain to add attic insulation before next summer.

<u>Certainty of Adding Attic Insulation</u>	<u>All Who Plan To Add Attic Insulation</u>	<u>All Homeowners</u>
Absolutely certain	34	6
Fairly certain	41	7
Not certain-planning to add	25	4
Not planning to add	<u>NA</u>	<u>83</u>
Total	100	100
Number of Interviews	(178)	(1012)

These results further indicate that although a sizeable proportion (17%) initially state that they are planning to add attic insulation, this is a highly exaggerated estimate of those who will ultimately add the insulation. Perhaps the seventeen percent figure is a more accurate indication of the proportion who would like to add attic insulation.

Expected Cost Savings From Added Insulation

The question: *How much lower do you think your annual fuel bill will be if you put in this attic insulation?*

While the overwhelming majority (96%) feel their annual fuel bills will be lower if they add the attic insulation, almost half of those who anticipate a savings (44% of all who anticipate adding attic insulation) are uncertain of the amount of savings. Among those who are able to estimate their savings, in most cases the estimated savings are less than \$100.00.

<u>Amount of Savings on Fuel Bill</u>	<u>All Who Plan to Add Attic Insulation Before Next Summer</u>
Less than \$50	17
\$50 - \$99	15
\$100 - \$149	8
\$150 - \$199	5
\$200 or more	7
Don't know	44
Will not be lower	<u>4</u>
Total	100
Number of Interviews	(178)

SECTION IV

Knowledge of Home Insulation and
Sources of Information on Home Insulation

Homeowners Knowledge About How to Insulate the Attic

All those who reported that they planned to insulate their attics before next summer were asked:

The question: *Do you plan to do the work yourself or have it done by a contractor?*

Half (51%) of those planning attic insulation said they would do the work themselves, one fifth (20%) said they would hire a contractor, a few (4%) said they would do part of it themselves and have part done by a contractor; and the remainder (25%) were not sure how they would have it done.

<u>All Who Plan To Insulate Attic Before Next Summer</u>	
	%
<u>Person Who Will Insulate</u>	
Respondent	51
Contractor	20
Respondent and Contractor	4
Not sure	<u>25</u>
Total	100
Number of Interviews	(225)

Those who planned to do the work either entirely or in part by themselves were asked a series of questions to measure the extent to which they feel they have the necessary information to do the job. These questions appear on the following pages.

Knowledge of Insulation

The Questions: *If you do the work yourself what additional information do you feel you would need that you don't already have. For example, would you know what type of insulation to buy?*

Would you know from whom to buy the insulation?

Would you know what is a fair price to pay?

Would you know how to install the material?

The greatest lack of knowledge is in the area of price; half of those who plan to insulate are not certain what a fair price to pay for insulation would be. On the other hand, most feel knowledgeable about the type of insulation they will purchase (81%), about where they will purchase the insulation (82%) as well as about how to install the insulation (84%).

All Who Plan To Insulate Attic Before Next Summer

<u>Information</u>	<u>Know Type of In- sulation %</u>	<u>Know From Whom To Buy %</u>	<u>Know Fair Price %</u>	<u>Know How To Install %</u>
Have knowledge	81	82	50	84
Do not have knowledge	15	13	41	7
Not sure	<u>4</u>	<u>5</u>	<u>9</u>	<u>9</u>
Total	100	100	100	100
Number of Interviews	(125)	(125)	(125)	(125)

Where to Buy Insulation

The Question: *Where would you buy the material?*

When asked specifically where they felt they would purchase their attic insulation, the largest proportions mentioned lumber yards (32%) and home supply centers (28%). Seventeen percent did not know where they would purchase the material.

<u>Location</u>	All Who Plan To Insulate Attic Before Next Summer
	%
Hardware store	5
Home supply center	28
Lumber yard	32
Department store	7
Other	11
Don't know	<u>17</u>
Total	100
Number of Interviews	(125)

Ability To Find Contractors

Those who felt they would have the attic insulation installed entirely by or with the help of a contractor were asked:

The Questions: *Would you know how to find the names of people who might do the work?*

Would you know how to judge the work of the person who does the work?

Would you know what is a fair price to pay for the work?

Most homeowners who felt they would rely on a contractor to install the insulation reported that they knew how to find the names of contractors (91%). Many fewer, but still a large majority (74%) felt they would be able to judge the work performed by the contractor. However, again we find the greatest uncertainty expressed in the area of price; half are not certain what a fair price to pay a contractor would be.

All Who Plan To Use Contractor

<u>Information</u>	<u>Know Where To Find Names Of Contractors</u>	<u>Know How To Judge Contractor's Work</u>	<u>Know Fair Price To Pay</u>
	<u>%</u>	<u>%</u>	<u>%</u>
Have knowledge	91	74	52
Do not have knowledge	3	20	34
Not sure	<u>6</u>	<u>6</u>	<u>14</u>
Total	100	100	100
Number of Interviews	(55)*	(55)*	(55)*

* Note small sample size.

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Expected Price of Insulation

The Question: *About how much do you think this insulation you are planning to do will cost?*

Among homeowners who anticipate using a contractor to add or to help add attic insulation, the largest proportion (35%) expect to pay \$500 or more. On the other hand, only 9% expect to pay less than \$200. Almost one in four (24%) are uncertain what the price would be.

In making comparisons between reported price paid for insulation and price expected to pay it must be taken into consideration that reported costs include both those who did and did not use a contractor, while anticipated price is limited to those who plan to use a contractor to do some or all of the work. Yet even despite this, the difference in prices for the two groups is so large that we might generalize that those who have not insulated tend to have an exaggerated notion of the amount that insulation is likely to cost. If this is indeed the case, this perceived high cost may act as an inhibiting factor in the decision to insulate, particularly among lower income households.

<u>Cost</u>	<u>All Who Insulated Attic In Past 12 Months</u>	<u>All Who Plan To Use A Contractor</u>
	<u>Reported Cost</u>	<u>Anticipated Cost</u>
	%	%
Under \$100	21	1
\$100 - \$199	18	8
\$200 - \$299	11	16
\$300 - \$399	8	12
\$400 - \$499	na	4
\$500 or more	na	35
\$400 or more	11	na
Don't know	31	24
Total	100	100
Number of Interviews	(181)	(55)
Median Price Range	\$100-\$199	\$400-\$499

* Note small sample size.

Delays in Getting Supplies

The questions: *Have you talked to any dealer or contractor about this work?*

(Asked of those who plan to have work done by contractor.)

Those who had talked to a dealer were asked:

Did the dealer or contractor say there might be a delay in getting supplies?

About half of the small group of homeowners who plan to have their attic insulation done or partly done by a contractor reported that they had talked to a contractor and, of those who did so, one-fourth said that the contractor had indicated that there would be a delay. The results for homeowners planning to have a contractor insulate their attic follow:

	<u>Per Cent</u>
Talked to a contractor	45
Contractor said there would be a delay	12
Contractor did not indicate a delay	<u>33</u>
Had not talked to contractor	<u>55</u>
Total	100
Number of Interviews	(55)

Sources of Information About Home Insulation

The Question: *What sources of information do you rely on most to find out how to insulate your home for the winter?*

The table below shows the division of replies for three groups -- all homeowners, those who feel they need to insulate and those who plan to insulate. Many of those in each group were unable to name a reliable source.

	<u>All Homeowners</u> %	<u>Homeowners Who Need To Ins. Attic</u> %	<u>Homeowners Who Plan To Insulate Attic</u> %
A friend	16	17	20
Magazine article	13	16	22
Newspaper article	12	13	12
Utility company	9	10	10
TV ad	7	8	7
Hardware dealer	7	8	9
Newspaper ad	6	6	5
Magazine ad	3	4	3
TV show	2	2	1
Point of purchase display	2	3	4
Radio news	1	1	1
Radio ad	1	*	*
Direct mail	1	1	2
Schools	*	0	0
Nothing named, don't know	47	42	34
Number of Interviews	(1012)	(378)	(154)

* Less than one half of one percent

** Based on those who perceive a need to insulate as defined in Section

Trust In Various Sources About Insulation Needs

The Question: *Which of the following would you trust to tell you how much insulation you need or don't need:*

*The government?
Electric or gas utility company?
Insulation manufacturer?
Insulation installer?
Insulation retail store?*

Of the five sources, an electric or gas utility company was most frequently named (by 56%) as being trusted for information about insulation needs. The government ranked second and was named by about half (47%) of all homeowners. The proportion who said they would trust each of the five sources follows:

	<u>All Homeowners</u> %
Electric or gas utility company	56
The government	47
Insulation manufacturers	38
Insulation installer	32
Insulation retail store	27

Cross tabulations of the various parts of the above question show that many of those who would trust one of the sources would also trust the others. For example, three out of four of those who would trust the government would also trust the electric or gas utility company. Half of those who trust the government would trust an insulation manufacturer. Majorities of about three out of five of those who trust utilities, manufacturers and retail stores would also trust the government.

Those who do not trust the various organizations include many who are skeptical about the energy problem. About four of every ten who do not trust the utilities think that the energy problem is not real and that it's just talk designed to get more money from consumers for the oil, gas and electric companies. A similar proportion of those who don't trust the government think that the energy problem is not real.

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SECTION V

Attitude of Homeowners Toward
The Energy Situation

Attitude Toward The Seriousness of The Energy Crisis

One important consideration in assessing inclination to add home insulation is attitude toward the "energy crisis". The following trend analysis is included in order to place the results of the current survey in perspective.

As the following table indicates, there have been considerable fluctuations over the past year in the public's perception of the seriousness of the energy situation. This is an important consideration in assessing the likelihood of consumers to insulate their homes because we would expect the decision to insulate to be based at least in some part on attitude toward the energy crisis, and consequently any estimate of the proportion who intend to insulate will be influenced in part by the current climate of opinion on the energy situation.

The question: *How serious is the energy situation?*

<u>Date</u>	<u>Very Serious</u> %	<u>Fairly Serious</u> %	<u>Not At All Serious</u> %	<u>No Opinion</u> %	<u>Total</u> %
October 1977	42	47	10	1	100
September 30, 1977	40	40	16	4	100
August 5, 1977	38	43	13	6	100
June 3-6, 1977	40	42	13	5	100
April 29-May 2, 1977	44	41	12	3	100
April 1977	54	36	7	3	100
-- Carter TV Speech on Energy --					
April 1977	41	39	16	4	100

In order to assess the public's perception of the energy situation in the current survey a series of four questions was asked with the intent of probing the degree of seriousness with which individuals rate the issue.

The results of the first question indicate that roughly one in three (31%) take a cynical view of the whole issue, and feel that the energy problem is "just talk designed to get more money from consumers for oil, gas and electric companies". An additional 17% are uncertain whether there

is an energy problem, while a slight majority (52%) responded affirmatively that there is an energy problem.

The question asked: *Do you think there's a real energy problem or do you think that it's talk designed to get more money from consumers for the oil, gas and electric companies?*

	<u>Total Sample</u> %
Real Problem	52
Just Talk	31
Don't Know	<u>17</u>
Total	100
Number of Interviews	(1012)

When asked whether they felt there would be a serious energy shortage in the next five years, somewhat less than a majority (45%) responded affirmatively. However, when those who responded to the question negatively or with a no opinion response were asked whether they felt there would be a serious energy shortage in the next ten years, an additional 19% responded affirmatively. In short, while a majority of the American public (64%) feel there will be a serious energy shortage within the next ten years, a sizeable proportion (19%) feel that energy shortages will become a serious problem only after the next five year period.

The question asked: *Do you think there will be a serious energy shortage in this country within the next five years?*

Those who answered "No" or "Don't Know" were then asked: *How about in the next ten years?*

	<u>In the next five years</u> %	<u>In the next ten years</u> %	<u>In the next five or ten years</u> %
Yes	45	19	64
No	43	20	20
Can't Say	<u>12</u>	<u>16</u>	<u>16</u>
Total	100	55 *	100
Number of Interviews	(1012)	(1012)	(1012)

* The 55% total is the sum of 43% and 12% who responded "No or "Can't say" (respectively) to the previous question.

Fear of a second oil embargo is a concern of only slightly more than one in three (35%). The majority (57%) do not worry about whether foreign oil producers will suddenly stop their shipments of oil and gasoline to this country.

The question asked: *Do you worry about whether foreign oil producers will suddenly stop their shipments of oil and gasoline to this country as happened four years ago?*

	<u>Total Sample</u> %
Yes	35
No	57
Don't Know	<u>8</u>
Total	100
Number of Interviews	(1012)

Perhaps one reason for this lack of concern is the fact that many Americans continue to be unaware of the degree of American dependence on foreign oil. A Gallup Poll conducted in April of 1978 concluded that "The Carter administration's year long effort to educate the public as to the seriousness of the energy situation has made no progress". The survey found that sixty percent of the public knew that America had to import oil to satisfy its energy demands. And among this group, thirty-one percent (or nineteen percent of all adults) had an accurate idea of how much petroleum the U.S. currently imports.

When asked whether they worry about natural gas shortages, only one in five (21%) responded affirmatively. A large majority (75%) do not worry about natural gas shortages, and the remaining four percent offered no opinion.

The question asked: *Do you worry about whether natural gas shortages will occur this winter like they did last winter?*

	<u>Total Sample</u> %
Yes	21
No	75
Don't Know	<u>4</u>
Total	100
Number of Interviews	(1012)

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If we take into consideration the results of the questions measuring the public's perception of the seriousness of the energy situation, we must conclude that for a sizeable proportion of the American public the issue is not defined as a crisis, nor is it one that causes great concern.

At the same time, a minority but still a significant proportion of the American public worry about another oil embargo (35%) and worry about natural gas shortages (21%). Later analysis will indicate the importance of this concern in the decision to add insulation.

Who are these people who are not concerned about the energy problem? They include more of those with less than a college education than the concerned group. They also include more manual than white collar workers. Somewhat more of the people in the Midwest than of that in other regions say the energy problem is "just talk". People who say the Energy Crisis is "just talk" are also more inclined to mistrust the advice of both the government and the utility companies about insulation needs. The group which worries about gas shortages includes more of those who think the Energy Crisis is real than the group which doesn't worry about gas shortages.

Attitudes Toward Energy Conservation

The questions: *Do you think that saving energy requires you to sacrifice something?*

Are there benefits to being an energy saver?

Do most people whom you know try to save energy or are they generally wasteful in their use of gasoline, heating fuel, and electricity?

Most homeowners have a sacrificial view of energy conservation, rather than one of increased efficiency. While most (70%) accept that conserving energy requires some sacrifices, the overwhelming majority (90%) feel that at the same time there are benefits to being an energy saver.

A majority of homeowners (65%) also report that most people they know try to save energy. To the degree that perceived peer pressure is a relevant factor, this attitude may exert a positive influence. To the extent this question is a projective one, we may infer that two-thirds of the people are trying to save energy.

As would be expected, those who feel the energy problem is a real one are more likely than others to feel that there are benefits to being an energy saver. It is also interesting to note that those who feel the energy problem is a real one are also more likely than others to feel that energy saving requires some sacrifices.

<u>Does Energy Saving Require Some Sacrifices</u>		<u>All Homeowners</u>
Yes		70
No		28
Don't know		<u>2</u>
Total		100
Number of Interviews		(1012)

<u>Are There Benefits to Saving Energy</u>		
Yes		90
No		7
Don't know		<u>3</u>
Total		100
Number of Interviews		(1012)

<u>Most People Save/ Are Wasteful</u>		
Most try to save		65
Most are wasteful		27
Don't know		<u>8</u>
Total		100
Number of Interviews		(1012)

SECTION VI

The Likely Impact of Federal Financial
Aid On The Decision To Insulate

Awareness of Government Financial Aid

The questions: *Are you aware of any kinds of financial help from the Government for home insulating materials?*

All who answered "Yes" were asked:

Is that a factor in whether or not you want to install it now?

Most homeowners (65%) acknowledge that there is not Government financial help available to them if they add insulation to their homes. Among those who feel there is Government assistance, fourteen percent report that this was a factor in their decision to add insulation now. This fourteen percent represents five percent of all homeowners.

<u>Response</u>	<u>Aware of Financial Help</u>	<u>Financial Help a Factor in Insulating</u>
Yes	35	14
No, Don't know	<u>65</u>	<u>86</u>
Total	100	100
Number of Interviews	(1012)	(380)

The Effect Of A Tax Credit On Attic Insulation

The question: *If the Federal Government were to give you back 20 cents for every dollar of the cost as a tax credit, how likely is it that you would buy attic insulation this winter, very likely, fairly likely or not likely?*

	<u>All Homeowners</u>
	<u>%</u>
Very likely	14
Fairly likely	10
Not likely	39
Don't need (attic insulation)	33
Don't know	<u>4</u>
	100
Number of Interviews	•, (1012)

Fourteen percent of the homeowners replied that they would be very likely to install attic insulation this winter if the Federal Government offered a twenty percent tax credit. However, in order to determine the percentage increase in the number who would insulate because of the tax credit, the results to this question must be considered in relation to previous questions measuring the likelihood of adding attic insulation when tax incentives are not available.

Somewhat more than half of this "very likely" group previously indicated that they would not insulate their attic this winter (8% out of 14%). Moreover, two percent of the fourteen percent "very likely" group previously indicated on an earlier question that they had considered and then given up the idea of adding attic insulation between now and next summer.

Earlier we noted that cost is a major consideration in the decision to add insulation. Taking this into consideration it is not surprising that considerably more homeowners are likely to add insulation when there is a tax incentive than are likely to add insulation when no incentive is available.

It is further interesting to note that if we base the results of the tax credit question on those who report that they need attic insulation, we find that thirty-four percent are very likely to add insulation with the tax incentive and an additional twenty-two percent are fairly likely to do so. Moreover, nine out of ten (90%) of the total "very likely" to insulate group indicate that they feel that the addition of more attic insulation would result in savings on their heating fuel.

In sum, the results seem to indicate that because cost is an important consideration in the decision to add attic insulation, the availability of a Federal tax credit would substantially increase the proportion who are very likely to insulate their attic this year. In general terms, roughly twice as many are likely to insulate their attic with a twenty percent tax credit as are likely to insulate without any tax incentives.

<u>Plans To Insulate Attic Before Next Summer</u>	
Absolutely certain	7
Fairly certain	6
Not certain	4
Not planning to insulate attic	<u>83</u>
Total	100
Number of Interviews	(1012)

<u>Likelihood of Adding Attic Insulation This Winter With 20% Tax Credit</u>	
Very likely	14
Fairly likely	10
Not likely	39
Don't need	33
Don't know	<u>4</u>
Total	100
Number of Interviews	(1012)

The Effect Of A Tax Credit On Buying Storm Windows

The question: *How likely would you be to buy storm windows this winter if you got a 20 percent tax credit, very likely, fairly likely or not likely?*

	<u>All Homeowners</u>
	%
Very likely	7
Fairly likely	6
Not likely	30
Don't need (storm windows)	54
Don't know	<u>3</u>
	100
Number of Interviews	(2012)

The results to this question are consistent with those measuring the impact of a tax credit on the installation of attic insulation. As the above table shows, seven percent of all homeowners are very likely to add storm windows this winter if the Federal Government offered a twenty percent tax credit. However, three out of four of this "very likely" group (or five percent of the seven percent) replied previously that they were not likely to add storm windows. Moreover, if we consider only those who feel they need storm windows, twenty-eight percent reply that they are "very likely" to buy storm windows with the tax incentive, and an additional twenty percent would be "fairly likely" to do so.

The following tables give some indication of the proportionate increase in the number of homeowners who would consider adding storm windows if the Federal Government offered a twenty percent tax credit to help offset the cost of the windows. When homeowners were asked what, if anything, they would do to make it less expensive to heat their homes this winter, five percent spontaneously responded that they would add storm windows. However, when probed, only three percent reported that they were absolutely certain or somewhat likely to add the storm windows.

When homeowners were asked whether or not they were planning to add storm windows before next summer, eight percent responded affirmatively. If this eight percent had been probed concerning the likelihood of their actually adding the storm windows, we might speculate that a somewhat smaller proportion than eight percent would reply that they were very likely or fairly likely to actually purchase the storm windows. On the other hand when homeowners were asked how likely they would be to add storm windows this winter if they received a twenty percent tax credit, thirteen percent reported that they would be very likely or fairly likely to purchase the storm windows. In sum, it appears that the added incentive of a twenty percent tax credit roughly doubles* the proportion who report that they are very or fairly likely to purchase storm windows.

<u>What Will Be Done To Make It Less Expensive To Heat Home This Winter? (Spontaneous Response)</u>	<u>All Homeowners</u>
Absolutely certain to add storm windows	2
Somewhat likely to add storm windows	1
Not very likely/don't know if likely to add storm windows	2
Net: Add storm windows	5
<u>Planning To Add Storm Windows Before Next Summer</u>	
Planning to add	8
Not planning/don't know if planning	92
<u>Likelihood of Adding Storm Windows With 20% Tax Credit</u>	
Very likely	7
Fairly likely	6
Not likely	30
Don't need	54
Don't know	3

* In other words, if we assume the 8% "planning to insulate" figure over represents the combined "very or fairly likely to insulate" figure (because the question was not probed) by one or two percentage points, we can conclude that the 13% who are very or fairly likely to insulate with a 20% tax credit is roughly double the proportion who report that they are planning to insulate when a tax credit is not mentioned.

SECTION VII

Inhibiting Factors In The Decision
To Add Home Insulation

Sincerity of Intention To Insulate

The survey included four questions which were designed mainly to test homeowners sincerity in connection with their plans to insulate the attic. The first question was:

"Do you think it would be too much trouble to put more insulation in your attic or not?"

One of every five (21%) indicated that they felt it would be too much trouble to put more insulation in their attics, and an additional twelve percent were not certain.

	<u>All Homeowners</u>
	<u>%</u>
Yes	21
No	67
Don't know	<u>12</u>
Total	100
Number of Interviews	(1012)

The second question in this series asked:

"Do you think you will wait until next year to add any more insulation to your attic?"

	<u>All Homeowners</u>
	<u>%</u>
Yes	31
No	43
Don't know	<u>26</u>
Total	100
Number of Interviews	(1012)

As the results in the table above show, thirty-one percent reported that they would wait until next year to add any more attic insulation. Moreover, among those who initially said they plan to insulate their attics before next summer, a small proportion (7%) said they would wait until next year to insulate. One of every six (17%) of those who said they need attic

insulation said it would be too much trouble to add more attic insulation. One-sixth (16%) of those who recognized that the addition of attic insulation would save fuel also answered "Yes" to the above question.

About three out of every ten (29%) of those said they plan attic insulation by next summer answered that they will wait until next year to add attic insulation. About half (54%) of those who need attic insulation said they would wait until next year.

The third of these questions read:

"Do you agree or disagree with the following: I have more important things to spend my money on this winter than more attic insulation."

Half of those surveyed agreed that they had more important things to spend their money on than home insulation. Moreover, about one-fourth of those who are planning to insulate their attics before next summer agree with the statement, while almost one-half of those who report that they need attic insulation agree with the statement.

<u>Agreement With Statement</u>	<u>All Homeowners</u>
Agree	50
Disagree	35
Don't know	<u>15</u>
Total	100
Number of Interviews	(1012)

The fourth question was: *Have you considered and then given up the idea of adding more attic insulation to your home between now and next summer?*

	<u>All Homeowners</u>
	<u>%</u>
Yes	13
No	83
Don't know	<u>4</u>
Total	100
Number of Interviews	(1012)

One of every four of those who had reported that they need attic insulation had considered and then given up the idea of adding more attic insulation.

The Effect of Shortages of Insulating Material

The questions: *Since last August, have you tried to get attic insulation material?*

Those who answered "Yes" were asked:

Were you able to get the insulation material you wanted or not?

Those who were unable to get the material wanted were asked why they were unable to get it.

About one homeowner in ten (11%) said that he or she had tried to get attic insulation since last August. But more importantly, almost half (5%) of those who tried to obtain insulating material reported that they were unable to get the material they wanted.

	All Homeowners %
Tried to get insulation material	11
Were able to get wanted material	6
Unable to get wanted material	<u>5</u>
Had not tried to get insulation material	<u>89</u>
	100
Number of Interviews	(1012)

Of the five percent of homeowners who reported that they were unable to get the insulation material they wanted, almost all said that the material was not available. Less than one-half of one percent said the price was too high or that they could not get the particular kind sought. If these limited experiences can be generalized to the population as a whole, the unavailability of insulating material could prove to be the greatest inhibiting factor in the addition of insulation. This is particularly true when we take into consideration that while many homeowners report that they plan to add insulation, in most cases these intentions are not strongly held. We might speculate, then, that most homeowners would not spend a great deal of effort locating scarce materials, but would rather decide not to insulate if they had difficulty purchasing the necessary materials.

Attitude Toward The Future Cost of Home Insulation

The questions: *Do you think the price of insulation has gone up faster than other home items in the past 12 months or not?*

Do you think the price of insulation will go up faster than other home items in the next year?

A large proportion of respondents feel that the cost of home insulation has risen faster in the past year (41%) or is going to rise faster in the coming year (55%) than other home items. In short, during a period of a rapid increase in the cost of living, the cost of home insulation is believed by most to be rising even faster than other home items. Again, the perceived rise in the cost of home insulation may prove to be a serious impediment in the decision to insulate. One method of counteracting this would of course be for the government to effectively lower prices by granting a tax credit for money spent on home insulation.

<u>Increase In Cost of Insulation Relative To Other Home Items</u>	<u>In the Past 12 Months</u> %	<u>In the Next 12 Months</u> %
Faster	41	55
Not Faster	17	17
Don't Know	<u>42</u>	<u>28</u>
Total	100	100
Number of Interviews	(1012)	(1012)

SECTION VIII

Likelihood of Purchasing Home Insulation:
The Case of Attics

Likelihood of Purchasing Insulation

One objective of the survey is to estimate the number of homeowners who are likely to install insulation. An important consideration in making such an estimate is the tendency for consumers to overestimate the likelihood of engaging in a purchase activity when asked to respond to a hypothetical purchase situation in an interview. One method of trying to minimize this error is to add a number of other questions about the subject which will tend to validate the response about purchase intention. A number of such questions have been included in this survey, and will be included in the analysis in the following two sections.

The analysis of purchase intent in this section is focused on attic insulation rather than on all types of insulation since this is considered the most important element of insulation. Heat loss due to insufficient attic/crawl space insulation is a major cause of higher fuel bills. Also, a larger proportion of homeowners anticipate adding attic insulation than anticipate adding other types of insulation, and this larger sample size allows us to do more multivariate analysis.

One assumption in the following analysis is that there must be some perceived need for attic insulation which precedes the decision to purchase attic insulation. Therefore the population of homeowners has been divided into two groups - those who perceive a need for attic insulation and those who do not perceive a need for attic insulation - based on the following criteria:

- A. No perceived need for attic insulation. All who:
 - do not have an attic/crawl space or
 - have attic insulation and do not need more attic insulation or
 - do not know if they have attic insulation or
 - do not know if they need attic insulation
- B. Perceived need for attic insulation. All who do not fit any of the criteria above.

The table below demonstrates that sixty-three percent of all homeowners do not perceive a need for attic insulation. This includes forty-eight percent who both currently have attic insulation and do not feel that they need additional insulation; and twelve percent who do not have an attic or a crawl space. Therefore, according to our defining criteria only thirty-seven percent of all homeowners perceive a need for attic insulation. The following analysis is based on this group.

	<u>All Homeowners</u>
<u>No Perceived Need For Attic Insulation</u>	
No attic/crawl space	12
Have attic insulation <u>and</u> do not need more attic insulation	48
Don't know if have attic insulation	5
Don't know if need attic insulation	<u>7</u>
Net Total: Do not need attic insulation	63*
Need Attic Insulation	<u>37</u>
Total	100**
Number of Interviews	(1012)

* Total is less than the sum of the defining criteria because these criteria are not mutually exclusive.

** Total figure is the sum of those who do and do not perceive a need for attic insulation.

Likelihood of Adding Attic Insulation

The questions: *Which of the following kinds of home materials are you planning to add between now and next summer?*

Those who answered attic insulation were asked:

How certain are you that you will add the attic insulation you mentioned between now and next summer: absolutely certain, fairly certain or not certain?

Among those who have been defined as perceiving a need for attic insulation a total of forty-one percent are planning to add attic insulation before next summer. This group includes fourteen percent who are absolutely certain that they will add attic insulation. The remaining fifty-nine percent are not planning to add attic insulation before next summer.

<u>Likelihood of Adding Attic Insulation</u>	<u>All Homeowners</u> %	<u>All Who Perceive A Need for Attic Insulation</u> %
Absolutely certain*	6	14
Planning to add	17	41
Not planning to add	<u>83</u>	<u>59</u>
Total	100	100
Number of Interviews	(1012)	(378)

* The absolutely certain category is a subset of the planning to add group.

Likelihood of Purchasing Attic Insulation Analyzed by Demographic Characteristics

Those homeowners most likely to add attic insulation before next summer appear to have the following demographic characteristics:*

- annual household income of more than \$5,000
- homeowners under the age of fifty
- residents of non-metropolitan areas
- those who reside in the Midwest

Likelihood of Adding Attic Insulation

	<u>Absolutely Certain</u>	<u>Planning To Add</u>	<u>Not Planning To Add</u>	<u>Total**</u>	<u>Number of Interviews</u>
Total	14	41	59	100	(378)
<u>Annual Household Income</u>					
\$20,000 and over	16	44	56	100	(120)
\$15,000 - \$19,999	15	43	57	100	(79)
\$10,000 - \$14,999	15	48	52	100	(89)
\$ 5,000 - \$ 9,999	15	41	59	100	(56)
Under \$5,000	6	10	90	100	(31)
<u>Education of Respondent</u>					
College	18	47	53	100	(188)
High School	10	36	64	100	(153)
Grade School	18	39	61	100	(34)

* Note small sample size.

** Sum of the Planning to Add and Not Planning to Add. The Absolutely Certain group is a subset of the Planning To Add Group

	<u>Likelihood of Adding Attic Insulation</u>				<u>Number of Interviews</u>
	<u>Absolutely Certain</u>	<u>Planning To Add</u>	<u>Not Planning To Add</u>	<u>Total</u>	
<u>Age of Respondent</u>					
18 - 34 years	16	48	52	100	(96)
35 - 49 years	17	41	59	100	(118)
50 and older	11	37	63	100	(158)
<u>Occupation of Chief Wage Earner</u>					
Professional & Business	16	45	55	100	(100)
Clerical & Sales	14	46	54	100	(49)
Manual & Farmer	14	41	59	100	(131)
Non-Labor Force	12	32	68	100	(82)
<u>Community Size</u>					
Central City	9	34	66	100	(88)
Suburb	12	47	53	100	(153)
Non-SMSA	20	39	61	100	(137)
<u>Region</u>					
East	13	42	58	100	(110)
Midwest	20	43	57	100	(134)
South	11	40	60	100	(93)
West	11	34	66	100	(41)

Likelihood of Adding Attic Insulation Analyzed by Attitude Toward The Energy Crisis

Overall the results of the following tables indicate that attitude toward the energy crisis does not bear a strong relationship to likelihood of adding attic insulation before next summer. There is a very slight tendency for those who worry about natural gas shortages this winter and who worry about an oil embargo to be more likely to say that they are absolutely certain to add attic insulation than those who do not worry about these problems. However, these differences are not statistically significant at the ninety-five percent confidence level.

When we consider concern for the energy situation in the next five years the relationship with likelihood of adding attic insulation remains very small. Forty-five percent of those who worry that there will be an energy shortage in the next five years plan to add attic insulation, compared with forty percent of those who do not worry that there will be an energy shortage. Again, these differences are not significant at the ninety-five percent confidence level.

	<u>Likelihood of Adding Attic Insulation</u>				<u>Number of Interviews</u>
	<u>Absolutely Certain</u>	<u>Planning To Add</u>	<u>Not Planning To Add</u>	<u>Total</u>	
Total	14	41	59	100	(378)
<u>Is Energy Problem Real</u>					
Real	15	43	57	100	(212)
Just talk	15	41	59	100	(107)
<u>Worry About Natural Gas Shortages This Winter</u>					
Yes	19	42	58	100	(83)
No	13	41	59	100	(280)
<u>Worry About Energy Shortage In Next Five Years</u>					
Yes	18	45	55	100	(176)
No	14	40	60	100	(159)
<u>Worry About Oil Embargo</u>					
Yes	16	41	59	100	(148)
No	12	41	59	100	(205)

The Impact of Cost Factors on The Decision To Insulate

Thirteen percent of the homeowners surveyed reported that they had considered and then given up the idea of adding more attic insulation to their homes before next summer. When this group was asked why they decided not to insulate, the most frequently mentioned reason was the cost involved.

<u>Why Did You Decide Not To Insulate</u>	<u>All Homeowners Who Decided Not To Insulate</u>
	%
Too expensive	36
Don't need	33
Plan to sell house	7
Couldn't get material	6
No time	4
Impossible to do	1
Other	2
Don't recall	<u>16</u>
Total	105*
Number of Interviews	(135)

* Total exceeds one hundred percent due to multiple responses.

The question: *If the price of fuel goes up will you be more likely or less likely to add attic insulation?*

When those who feel they need attic insulation were asked what impact increased fuel prices would have on the likelihood of their purchasing attic insulation, sixty percent replied that they would be more likely to add the insulation. Again, this indicates a relationship between perceived cost savings and likelihood of adding insulation.

<u>Likelihood of Adding Attic Insulation If Fuel Prices Increase</u>	<u>All Homeowners</u> %	<u>All Who Perceive A Need For Attic Insulation</u> %
More likely	34	60
Less likely	29	16
About as likely	20	14
Don't know	<u>17</u>	<u>10</u>
Total	100	100
Number of Interviews	(1012)	(278)

Among all homeowners, on the other hand, almost as many are less likely to add attic insulation (29%) as are more likely to add attic insulation (34%) if the price of fuel goes up.

The question: *Would you buy \$300 worth of insulation to add to your attic if you could save that much on heating bills in the next 7 years?*

When those who feel they need more attic insulation were asked whether they would purchase \$300 worth of attic insulation if they could save that much in fuel bills in the next seven years, fifty-nine percent responded affirmatively. Among all homeowners, on the other hand, thirty-six percent responded affirmatively.

<u>Would Add Insulation If \$300 Saved</u>	<u>All Who Perceive a Need For Attic Insulation</u>	<u>All Homeowners</u>
	%	%
Yes	59	36
No	21	23
Don't know	9	12
Don't need insulation	<u>11</u>	<u>29</u>
Total	100	100
Number of Interviews	(378)	(1012)

This concern for cost is further pointed out in our analysis of the relationship between likelihood of adding attic insulation and a series of cost factors.

Those who feel the addition of attic insulation would cut their heating cost are considerably more likely to state that they are absolutely certain to insulate their attics before next summer (17%) than are those who do not feel that the added insulation would cut fuel bills (1%). Similarly, twenty-two percent of those who would buy \$300.00 worth of attic insulation if they could save \$300.00 on heating bills in the next seven years are absolutely certain to add attic insulation. On the other hand, among those who would not buy \$300.00 worth of attic insulation if it saved them \$300.00 in heating bills in seven years, only four percent are absolutely certain to insulate.

In light of these results, it is not surprising that likelihood of insulating is related as well to Federal financial aid. Among those who feel Federal aid is already available, forty-six percent plan to add attic insulation, while among those who do not feel Federal aid is currently available only thirty-seven percent plan to add attic insulation before next summer. Similarly, among those who would be very likely to purchase attic insulation if there were a twenty percent tax credit, thirty-five percent report that they are absolutely certain to buy attic insulation before next summer; while among those who are not likely to purchase attic insulation if there were a twenty percent tax credit five percent report that they are absolutely certain to buy attic insulation before next summer.

<u>Likelihood of Adding Attic Insulation</u>				
	<u>Absolutely Certain</u>	<u>Planning To Add</u>	<u>Not Planning To Add</u>	<u>Total</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Total	14	41	59	100
<u>Would Attic Insulation Cut Heating Cost</u>				
Yes	17	46	54	100
Don't know	7	32	68	100
No	1	8	92	100
<u>Would Buy \$300 Insulation If It Saved \$300 In 7 Year Heating Bill</u>				
Yes	22	57	43	100
No	4	13	87	100
<u>Aware of Government Financial Aid</u>				
No	13	37	63	100
Yes	16	46	54	100
Government Aid A Factor In Decision To Insulate	19	44	56	100
<u>Likelihood of Purchasing Insulation With 20% Tax Credit</u>				
Very Likely	35	67	33	100
Fairly Likely	7	55	45	100
Not Likely	5	22	78	100
<u>More Important Things To Spend Money On Than Insulation</u>				
Agree	7	23	77	100
Disagree	24	62	38	100

Likelihood of Purchasing Insulation with Twenty Percent Tax Credit	All Homeowners	All Who Perceive a Need For Attic Insulation	
	Total %	Total %	Total Not Planning to Add %
Very likely	14	30	16
Fairly likely	10	18	14
Not likely	39	42	56
Don't need insulation	33	7	10
Don't know	4	3	4
Total	100	100	100
Number of Interviews	(1012)	(378)	(227)

The cross-tabulation of the results to these two questions indicates that the tax credit would have an impact on the likelihood of adding attic insulation. Among all homeowners only fourteen percent are absolutely certain that they will add this insulation. However, among those who perceive a need for attic insulation thirty percent, or roughly twice as many, report that they would be very likely to add attic insulation if the Federal government offered a twenty percent tax credit. Moreover, among those who initially indicated that they were not planning to add attic insulation before next summer, sixteen percent said they would be very likely to add attic insulation and an additional fourteen percent said they would be fairly likely to add attic insulation if the Federal government offered a twenty percent tax credit.

The results further indicate that the perceived cost of insulation may have acted as an inhibiting factor in the decision to add attic insulation. Among those who agree with the statement that the price of insulation has increased faster in the past twelve months, only eighteen percent report that they are absolutely certain to insulate their attics before next summer; this compares with twenty-six percent who are absolutely certain to insulate among those who disagree with the statement.

On the other hand, anticipation of future cost increases in the price of home insulation is not related to likelihood of purchasing attic insulation before this summer. Those who feel that the cost of insulation will increase faster than the cost of other household items in the next year do not differ in their intention to insulate from those who do not feel this way.

	<u>All Who Perceive a Need for Attic Insulation</u>			
	<u>Likelihood of Adding Attic Insulation</u>			
	<u>Absolutely Certain</u>	<u>Planning To Add</u>	<u>Not Planning To Add</u>	<u>Total</u>
	%	%	%	%
<u>Price of Insulation Increased In Past 12 Months Faster Than Other Items</u>				
Agree	18	45	55	100
Disagree	26	52	48	100
<u>Price of Insulation Will Increase Faster Than Other Items in Next Year</u>				
Agree	17	45	55	100
Disagree	17	46	54	100

Summary

The results of the preceding analysis seem to indicate that the intention to add attic insulation before next summer is perceived more as a cost saving measure than as an energy saving measure. That is, likelihood of adding attic insulation is not related to attitude toward the energy crisis but it is moderately related to cost factors. Not only can we infer that the decision to add attic insulation is perceived as a cost saving measure, but we can conclude as well that potential cost savings such as the twenty percent tax credit might have a substantial impact on the decision to insulate.

Perceived Impact of Additional Insulation on Fuel Bills

The question: *Do you think adding more insulation to your attic floor will help save home heating fuel or not?*

Among those who feel they need attic insulation, a large majority (82%) feel the additional insulation will cut the cost of their home heating fuel bill.

<u>Will Attic Insulation Cut Fuel Bill</u>	<u>All Who Perceive a Need For Attic Insulation</u> %
Yes	82
No	13
Don't know	<u>5</u>
Total	100
Number of Interviews	(378)

When those who reported that they were planning to add attic insulation before next summer were asked:

"How much lower do you think your annual fuel bill will be if you put in this attic insulation?"

virtually all (96%) felt there would be some savings. However, at the same time there was a large degree of uncertainty regarding the amount of savings. Forty-four percent of those planning to insulate their attics felt the added insulation would result in reduced fuel bills but they were not able to estimate the amount of expected savings.

<u>Amount of Savings</u>	<u>All Planning To Add Attic Insulation</u> %
Less than \$50	17
\$50 - \$99	15
\$100 - \$149	8
\$150 - \$199	5
\$200 or more	7
Don't know amount	44
No savings	<u>1</u>
Total	100
Number of Interviews	(178)

Attitude Toward The Future Cost of Home Heating

The question: *Do you expect your heating bills this winter to be higher than last winter, lower or about the same?*

Only one third of the home owners surveyed (34%) felt that their heating bills would be higher than last year. The majority (62%) felt their heating bills would either remain the same (43%) or even be lower (19%). Moreover, the proportion who felt their heating bill would increase did not vary significantly by region of the country. Moreover, homeowners who have added some form of insulation during the last year are more likely than those who have not done so to feel that their heating bills will be lower this winter than last winter.

<u>Cost of current home heating bill compared with last years</u>	<u>Region</u>				
	<u>Total</u>				
	<u>Sample</u>	<u>East</u>	<u>Midwest</u>	<u>South</u>	<u>West</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Higher	34	36	33	33	32
Same	43	39	42	43	54
Lower	19	19	21	19	13
Don't Know	<u>4</u>	<u>6</u>	<u>4</u>	<u>5</u>	<u>1</u>
Total	100	100	100	100	100
Number of Interviews	(1012)	(286)	(345)	(271)	(110)

In short, the results to the previous three questions indicate that most people do associate added insulation with lower fuel bills. However, there is a great deal of uncertainty regarding the amount of savings.

The question: *Would you like your gas or electric utility company to put more insulation in your attic and let you pay for it on time as part of your gas or electric bill?*

Even among those who feel they need more attic insulation, most would not like to pay for more attic insulation as a part of their gas or electric bill to a utility company.

<u>Like to Pay For</u> <u>Insulation on</u> <u>Utility Bill</u>	<u>All Who Need</u> <u>Attic Insulation</u>	<u>All</u> <u>Homeowners</u>
	<u>%</u>	<u>%</u>
Yes	23	14
No	60	48
Don't know	9	9
Don't need Insulation	<u>8</u>	<u>29</u>
Total	100	100
Number of Interviews (378)		(1012)

Likelihood of Adding Attic Insulation This Winter Vs. Last Winter

The question: *Are you more likely to add insulation to your attic floor or crawl space this winter than you were last winter?*

Most homeowners (60%) are not more likely (55%) or are about as likely (5%) to add attic insulation this winter as they were last winter. Seventeen percent report that they are more likely to add attic insulation this winter.

<u>Likelihood of Adding Attic Insulation This Winter Compared With Last Winter</u>	<u>All Homeowners</u>
	%
More likely	17
Not more likely	55
About as likely	5
Can't say	<u>23</u>
Total	100
Number of Interviews	(1012)

AID Analysis of Plans To Insulate Attic Before Next Summer

In order to simultaneously consider the effects of relevant independent variables on plans to add attic insulation, an AID analysis (Automatic Interaction Detector Analysis) was performed. The tree diagram from the AID analysis shows the characteristics of the group or groups of people who are most likely to plan to insulate their attics.* The percentage in each box indicates the percent with the given characteristics who plan to insulate their attics. The number in the upper left hand corner refers to the order in which the data were split.

The results of the AID analysis confirm our earlier hypotheses and findings that:

- perceived need to insulate is the most important determinant of plans to insulate attic and
- cost is a more important determinant of plans to insulate attic than attitude toward the energy crisis.

In order to reach this conclusion it is important to consider all the variables that could potentially have entered into the AID analysis. The following questions were included as independent variables in this analysis:

1. *Are you aware of any kinds of financial help from the Government for home insulating materials?*
2. *Do you think the price of insulation has gone up faster than other home items in the past 12 months or not?*
3. *Do you think the price of insulation will go up faster than other home items in the next year?*
4. *Do you think there's a real energy problem or do you think that it's talk designed to get more money from consumers for the oil, gas, and electric companies?*

* The AID algorithm uses a repeated one-way analysis of variance technique to explain as much of the variance of a dependent variable as possible. The AID analysis breaks the original data set into subgroups by using independent predictors in such a way that each split reduces the error of sum of squares as much as possible. The procedure stops when the number of cases in the groups is too small or when the reduction of sum of squares is too small.

5. Do you worry about whether natural gas shortages will occur this winter like they did last winter?
6. Do you think there will be a serious energy shortage in this country within the next 5 years?
7. Do you worry about whether foreign oil producers will suddenly stop their shipments of oil and gasoline to this country, as happened four years ago?
8. Do most people whom you know try to save energy or are they generally wasteful in their use of gasoline, heating fuel, and electricity?
9. Do you think that saving energy requires you to sacrifice something?
10. What is the primary fuel used to heat your house?
11. Region of the country.
12. Annual household income.
13. Index of current insulation.*
14. Index of need to insulate.**

* Index of current insulation. An additive index of current insulation was developed based on responses to Question 6. In each case "All" or "Yes" responses were given a score of three; "Some" responses were given a score of two; "Don't know" responses were given a score of one; and "None" or "No" responses were given a score of zero. An additive index of current insulation was computed for each homeowner based on these values. The resultant scores were then divided into four groups as follows: Little insulation (scores of zero - six); Some Insulation (scores of seven - twelve); Substantial Insulation (scores of thirteen - seventeen) and Completely Insulated (score of eighteen).

** Index of need to insulate. An additive index of need to insulate was developed based on responses to Question 10. In each case a "Yes" response was given a score of three; a "Don't Know" response was given a score of one; and a "No" response was given a score of zero. An additive index of need to insulate was computed for each homeowner based on these values. The resultant scores were then divided into four groups as follows: No need to insulate (score of zero); Little need to insulate (scores of one - six); Moderate need to insulate (scores of seven - twelve); and Substantial need to insulate (scores of thirteen - eighteen).

The first break in the AID tree indicates that perceived need to insulate is, as expected, the strongest predictor of intention to insulate. It further indicates that degree of need is not as important as whether or not there is a perceived need.

Figure 1. First Break in AID Tree

The second break in the AID tree indicates that among those who perceive a need to insulate their homes, the strongest predictor of current plans to insulate the attic is the belief that government financial aid is already available for those who add insulation. Among those who feel they need more insulation and who believe the government offers some financial aid, forty percent plan to add attic insulation before next summer. On the other hand, among those who feel they need more attic insulation but do not feel government financial aid is available, only twenty-six percent plan to insulate their attics before next summer.

Figure 2. Second Break In AID Tree

The third break (Groups 6 and 7) indicates that the belief that Federal financial aid is currently available acts as an intervening variable in the relationship between past and expected increase in the price of insulation and intention to insulate. Among those who feel Federal financial aid is currently available, the belief that the price of home insulation will increase faster than the price of other household items encourages the decision to insulate. However, among those who do not think Federal financial aid is available, the belief that the price of home insulation has increased in the past twelve months faster than the price of other household items acts as an inhibiting factor in the decision to add more attic insulation.

It is also important to note the variables that did not enter into the third break in the AID tree. Groups six and seven in the AID tree were divided based on the increase in the price of home insulation. However, concern for natural gas shortages this winter was only slightly weaker in its predictive value of plans to insulate. In other words, at this point in the AID analysis the cost of insulation was only slightly more powerful as a predictor of plans to insulate than was how much the respondent worried whether natural gas shortages will occur this winter like they did last winter.

The figure on the following page presents the entire AID tree for those breaks in which the number of interviews in both groups was one-hundred or greater. It should be emphasized in reading this diagram that because many of the independent variables are intercorrelated, each subsequent splitting of the data set should be considered to have diminishing importance. More specifically, the most attention should be paid to the first two breaks (through Groups 4 and 5) in the analysis.

Figure 3. AID tree For Plan to Insulate Attic

NOTE: This analysis excludes those breaks in which both groups have a number of interviews less than 100.

After taking into account the effects of each independent variable, this AID analysis explained twenty-four percent of the variance in plans to insulate attics before next summer ($r^2 = .238$). In other words, while we have explained much of the variance in plans to insulate attics, at the same time it would appear that there are other, perhaps ideocyncratic, factors that enter into plans to add attic insulation that have not been accounted for by the survey. This should be taken into consideration when estimating the number of homeowners who will actually attempt to purchase attic insulation before next summer.

SECTION IX

Estimate of Future Insulating Behavior

Estimate of Future Insulating Behavior

Estimates of future behavior based on responses to personal interviews must be made with caution. For example, in this survey we have already noted that a significant proportion of those who tried to purchase attic insulation found that the material was not available. Some of those who feel that they need a particular type of insulation may subsequently discover that they already have adequate insulation. Still others may be deterred by unexpected financial difficulties. On the other hand, some homeowners may strengthen their intention to purchase home insulation as they make note of the continual escalation in the cost of heating a home.

One important objective of this study is to provide an estimate of the number of homeowners who will add some type of insulation to their homes before next summer. In order to make this estimate as accurate as possible, a number of attitudinal factors will be considered; the estimate will not be based simply on the proportion who report that they plan to add insulation. The final analysis will then provide an estimate based on a range: the minimum and maximum number of homeowners who will try to add insulation before next summer.

Estimation of the Number of Homeowners Who Will Add Attic Insulation Before Next Summer

When asked whether they were planning to add attic insulation before next summer, 17% of all homeowners initially responded affirmatively. However, when later probed on the likelihood of adding the attic insulation, only 6% reported that they were absolutely certain and 7% that they were fairly certain to add the attic insulation. The remaining 4% were not certain.

In order to further refine our measurement on the proportion who will insulate their attics, the sample was screened based on a positive response to the following questions:

- Do you have an attic or crawl space you can get into?
- Do you feel you need or need more attic insulation?
- Annual household income \$5,000 or greater

and a negative response to the following questions:

- Have you considered and then given up the idea of adding more attic insulation to your home between now and next summer?
- Do you think it would be too much trouble to put more insulation in your attic or not?
- Do you think you will wait until next year to add any more insulation to your attic?

The following table presents the figures for the proportion who initially reported that they were planning to insulate, and the adjusted figures after taking into consideration all of the above factors.

	<u>Likelihood of Insulating Attic Before Next Summer</u>		
	<u>Plan To</u> <u>Insulate</u> <u>%</u>	<u>Absolutely</u> <u>Certain</u> <u>%</u>	<u>Fairly</u> <u>Certain</u> <u>%</u>
Total figure	17	6	7
Adjusted figure	9	4	4

Based on these figures we would estimate that between four percent and eight percent (the net of "absolutely certain" and "fairly certain" to insulate groups) will actually attempt to add insulation to their attics before next summer. If we project these proportions into number of owner occupied households with telephones*, we estimate that between 1,800,000 and 3,700,000 homeowners will attempt to purchase attic insulation before next summer.

* For a discussion of the number of owner occupied households with telephones in the national population see the Introduction to this report.

However, in addition to the more obvious factors which have been used to discount the "absolutely certain" and "fairly certain" percents such as an inaccessible attic or crawl space, there are undoubtedly a large number of other factors not measurable which will operate to reduce the likelihood of action. Our experience bears out this expectation. Therefore, we would recommend that to allow for these factors a further discounting be applied to the two figures. We would suggest something of the order of twenty percent for "absolutely certain" bringing it down to three percent; and fifty percent for "fairly certain" bringing it down to two percent. These are clearly judgmental corrections not supported by experimental evidence, but prudent adjustments to be made nonetheless.

Taking this "experience factor" into consideration, our final estimate of the proportion who will attempt to purchase attic insulation before next summer is between three percent and five percent of all homeowners. If we project these proportions into number of owner occupied households with telephones, we estimate that between 1,400,000 and 2,300,000 homeowners will attempt to purchase attic insulation before next summer.

TECHNICAL APPENDICES

COMPOSITION OF THE SAMPLE

	<u>Per Cent</u>
All Homeowners	100.0
<u>Sex of Homeowner</u>	
Men	86.9
Women	<u>13.1</u>
	100.0
<u>Education of Homeowner</u>	
College (complete and incomplete)	34.7
High School (complete and incomplete)	47.1
Grade School or no schooling	17.7
Undesignated	<u>.5</u>
	100.0
<u>Age of Homeowner</u>	
18 - 34 years	20.3
35 - 49 years	27.6
50 years and older	50.8
Undesignated	<u>1.3</u>
	100.0
<u>Annual Family Income</u>	
\$20,000 or more	28.8
\$15,000 - \$19,999	21.7
\$10,000 - \$14,999	22.7
Under \$10,000	25.2
Undesignated	<u>1.6</u>
	100.0
<u>Occupation of Homeowner</u>	
Professional & Business: Professional, technical, and kindred workers (e.g., engineers, accountants, nurses); Executives (e.g., managers, officials, proprietors, public administrators)	20.5
Clerical & Sales: Clerical and kindred workers (e.g., mail carriers, telephone operators); Sales and kindred workers (e.g., retail clerks, claims examiners)	9.3
Manual Workers: Foremen, craftsmen and kindred workers (e.g., railroad engineers, machinists, linesmen, maintenance, painters); Operatives and kindred workers (e.g., coal miners, truck drivers, butchers, apprentices); Service workers, laborers	34.0
Farmers: Farm owners, farm managers, farm foremen, farm laborers	3.5
Non-Labor Force	27.0
Undesignated	<u>5.7</u>
	100.0

*Obtained during original personal interview in household.

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	<u>Per Cent</u>
<u>Type of Area of Homeowner*</u>	
City	29.7
Suburb	28.2
Small town	19.2
Rural	22.2
Undesignated	0.7
	<u>100.0</u>
<u>Size of Community**</u>	
1,000,000 (including urban fringe)	16.0
250,000 - 999,999 (including urban fringe)	19.9
50,000 - 249,999 (including urban fringe)	13.4
2,500 - 49,999	18.5
Under 2,500	32.2
	<u>100.0</u>
<u>Region of Country***</u>	
East	25.2
Midwest	31.1
South	28.7
West	15.0
	<u>100.0</u>
<u>Type of Structure Where Homeowner Lives****</u>	
Single	94.0
Apartment	0.6
Mobile Home	2.6
Other Type	2.8
	<u>100.0</u>
<u>Primary Fuel Used</u>	
Oil	23.5
Natural Gas	59.0
Electricity	11.4
Other	7.1
	<u>101.0*****</u>

*Respondents definition of type of area.

**Census definition.

***See list of states in each region in Introduction.

****Includes 90.5% detached houses and 3.5% attached row, town houses or duplexes.

*****Includes a few houses using more than one kind of fuel.

DESIGN OF THE SAMPLE

The sample of homeowners interviewed by telephone for this survey was obtained by interviewing the head of household in households where, on the basis of recent Gallup personal interview surveys, it was found that the home was owned rather than rented. In households where there was a male head of household the male head was interviewed. In households consisting only of women, the female head of household was interviewed.

If, at the time of the initial call, the homeowner sought was not present, the interviewer asked when that person would likely be at home and made another call at the time suggested. The obtained sample was adjusted by geographic regions and by educational attainment to fit estimates of these distributions of homeowners living in telephone households.

The following is a description of the sample design of the personal interview survey which provided the frame of telephone households:

The sampling procedure was designed to produce an approximation of the adult civilian population, eighteen years and older, living in the United States, except for those persons in institutions such as prisons or hospitals. It also provides a sample of households or occupied dwelling units.

The design of the sample is that of a replicated, probability sample down to the block level in the case of urban areas, and to segments of townships in the case of rural areas. Approximately three hundred sampling locations are used in each survey.

The sample design included stratification by these four size-of-community strata, using 1970 Census data: (a) cities of population 1,000,000 and over; (b) 250,000 to 999,999; (c) 50,000 to 249,999; (d) all other population. Each of these strata was further stratified

into seven geographic regions: New England, Middle Atlantic, East Central, West Central, South, Mountain, and Pacific. Within each city size - regional stratum, the population was arrayed in geographic order and zoned into equal sized groups of sampling units. Pairs of localities were selected in each zone, with probability of selection of each locality proportional to its population size in the 1970 Census, producing two replicated samples of localities.

Within localities so selected for which the requisite population data are reported, subdivisions were drawn with the probability of selection proportional to size of population. In all other localities, small definable geographic areas were selected with equal probability.

Separately for each survey, within each subdivision so selected for which block statistics are available, a sample of blocks or block clusters is drawn with probability of selection proportional to the number of dwelling units. In all other subdivisions or areas, blocks or segments are drawn at random or with equal probability.

In each cluster of blocks and each segment so selected, a randomly selected starting point is designated on the interviewer's map of the area. Starting at this point, interviewers are required to follow a given direction in the selection of households until their assignment is completed.

Interviewing was conducted at times when respondents would most likely be at home, which means on weekends, or if on weekdays, after 4:00 P.M. for women and after 6:00 P.M. for men.

SAMPLING TOLERANCES

In interpreting survey results, it should be borne in mind that all sample surveys are subject to sampling error, that is, the extent to which the results may differ from what would be obtained if the whole population surveyed had been interviewed. The size of such sampling errors depends largely on the number of interviews.

The following tables may be used in estimating the sampling error of any percentage in this report. The computed allowances have taken into account the effect of the sample design upon sampling error. They may be interpreted as indicating the range (plus or minus the figure shown) within which the results of repeated samplings in the same time period could be expected to vary, 95 per cent of the time, assuming the same sampling procedure, the same interviewers, and the same questionnaire.

The first table shows how much allowance should be made for the sampling error of a percentage:

Recommended Allowance For Sampling Error of a Percentage						
In Percentage Points (at 95 in 100 confidence level)*						
-----Sample Size-----						
	<u>1000</u>	<u>300</u>	<u>200</u>	<u>100</u>	<u>50</u>	<u>25</u>
Percentages near 10	2	4	5	8	9	12
Percentages near 20	3	6	7	10	11	16
Percentages near 30	4	7	8	11	13	18
Percentages near 40	4	7	9	12	14	20
Percentages near 50	4	7	9	13	14	20
Percentages near 60	4	7	9	12	14	20
Percentages near 70	4	7	8	11	13	18
Percentages near 80	3	6	7	10	11	16
Percentages near 90	2	4	5	8	9	12

The table would be used in the following manner: Let us say a reported percentage is 33 for a group which includes 1012 respondents. Then we go to row "percentages near 30" in the table and go across to the column headed "1000". The number at this point is 4, which means that the 33 per cent

*The chances are 95 in 100 that the sampling error is not larger than the figures shown.

obtained in the sample is subject to a sampling error of plus or minus 4 points. Another way of saying it is that very probably (95 chances out of 100) the average of repeated samplings would be somewhere between 29 and 37, with the most likely figure the 33 obtained.

In comparing survey results in two samples (e.g. two subsamples such as East versus West) the question arises as to how large must a difference between them be before one can be reasonably sure that it reflects a real difference. In the tables below, the number of points which must be allowed for in such comparisons is indicated.

Two tables are provided. One is for percentages near 20 or 80; the other for percentages near 50. For percentages in between, the error to be allowed for is between those shown in the two tables:

Recommended Allowance for Sampling Error
of the Difference

		In Percentage Points (at 95 in 100 confidence level)*			
TABLE A		<u>Percentages near 20 or percentages near 80</u>			
Size of Sample		<u>300</u>	<u>200</u>	<u>100</u>	<u>50</u>
300		8			
200		9	10		
100		11	12	14	
50		15	16	17	20
TABLE B		<u>Percentages near 50</u>			
Size of Sample		<u>300</u>	<u>200</u>	<u>100</u>	<u>50</u>
300		10			
200		11	13		
100		14	15	18	
50		19	20	22	25

Here is an example of how the tables would be used: Let us say that 50 per cent of a subgroup respond a certain way and 30 per cent of another group respond that way also, for a difference of 20 percentage points between them. Can we say with any assurance that the 20 point difference reflects a real difference between the two groups on the question? Suppose one subgroup contains approximately 300 cases and the other 200 cases.

*The chances are 95 in 100 that the sampling error is not larger than the figures shown.

Since the percentages are near 50, we consult Table B, and since one sample includes about 300 persons and the other 200 we look for the number in the column headed "300" which is in the row designated "200". We find the number 11 here. This means that the allowance for error should be 11 points, and that in concluding that the percentage in the one group is somewhere between 9 and 31 points higher than the percentage in the other we should be wrong only about 5 per cent of the time. In other words, we can conclude with considerable confidence that a difference exists in the direction observed and that it amounts to at least 9 percentage points.

If, in another case, the responses in one group amount to 22 per cent, and, in another group 24 per cent, we consult Table A because these percentages are near 20. If we use the same combination of sample sizes, 300 and 200, we again look in the column headed "300" (in Table A) and go to the row designated "200". We see that the number is 9. Obviously, then, the 2 point difference is inconclusive.

SEX M() F()
 TIME STARTED _____
 TIME FINISHED _____
 LENGTH _____

A GALLUP TELEPHONE SURVEY
 THE GALLUP ORGANIZATION, INC.
 PRINCETON, NEW JERSEY

DATE _____
 SPOT NUMBER _____
 January 1978

INTERVIEWER'S NAME _____

SUGGESTED INTRODUCTION: Hello, I'm helping on a Gallup Survey and would like to speak to the male head of the household. (IF THERE IS NO MALE HEAD OF HOUSEHOLD THE FEMALE HEAD OF HOUSEHOLD SHOULD BE INTERVIEWED. THUS A WOMAN LIVING ALONE OR WITH ANOTHER WOMAN WOULD BE INTERVIEWED.)

1. Do you own or rent your home?

1() Own

2() Rent

3() Other arrangement

DISCONTINUE IF RENT OR OTHER ARRANGEMENT. CONTINUE WITH OWNERS.

2. How old is your home?

1() Less than 5 yrs. 2() 5-9 yrs. 3() 10-19 yrs. 4() 20 or more yrs. 5() Don't know

3. Do you have an attic or crawl space you can get into?

1() Yes

2() No

4. Do you expect your heating bills this winter to be higher than last winter, lower or about the same?

1() Higher

2() Lower

3() Same

V() Don't know

5a. What will you do, if anything, to make it less expensive to heat your home this winter? (DO NOT READ ANSWERS.)

1() Insulate attic or crawl space

8() Service the furnace

2() Insulate the walls

9() Clock thermostat

3() Install plastic sheeting over windows

0() Put thermostat down

4() Storm windows

X() Something else

5() Storm doors

V() Nothing (SKIP TO Q.6)

6() Caulking

1() Don't know

7() Weather stripping

IF "INSULATE ATTIC OR CRAWL SPACE" MENTIONED IN Q.5a, ASK:

5b. How likely is it that you will insulate the attic/crawl space - absolutely certain, somewhat likely, or not very likely?

1() Absolutely certain 2() Somewhat likely 3() Not very likely V() Can't say

IF "STORM WINDOWS" MENTIONED IN Q.5a, ASK:

5c. How likely is it that you will put in storm windows - absolutely certain, somewhat likely, or not very likely?

1() Absolutely certain 2() Somewhat likely 3() Not very likely V() Can't say

ASK EVERYONE:

6. Which of the following types of home material do you now have in your home?
- a. Insulation in your attic floor or crawl space? 1()Yes 2()No V()Don't know
 - b. Insulation in the walls of your home? 1()Yes 2()No V()Don't know
 - c. Storm windows on all, some or none of your windows? 1()All 2()Some 3()None V()Can't Say
 - d. Storm doors on all, some or none of your doors? 1()All 2()Some 3()None V()Can't Say
 - e. Weather stripping to close the gaps on all, some or none of your doors? 1()All 2()Some 3()None V()Can't Say
 - f. Caulking so that there are no cracks around all, some or none of your doors and windows? 1()All 2()Some 3()None V()Can't Say
 - g. Plastic sheeting over all, some or none of your windows? 1()All 2()Some 3()None V()Can't Say
7. Which of the following kinds of materials have you added to your home during the last 12 months? (READ LIST.)
- 1()Attic floor or crawl space insulation 6()Caulking of doors and windows
 - 2()Wall insulation (ASK Q.9) 7()Clock thermostat
 - 3()Storm doors 8()Service the furnace
 - 4()Storm windows 9()Plastic sheeting over windows
 - 5()Weather stripping of doors and windows X()None of them

ASK THOSE WHO HAVE NOT ADDED ATTIC FLOOR OR CRAWL SPACE INSULATION (SEE Q.7):

8. Are you more likely to add insulation to your attic floor or crawl space this winter than you were last winter?
- 1()More likely 2()Not more likely 3()About as likely V()Can't Say
- (SKIP TO Q.10)

IF ATTIC FLOOR OR CRAWL SPACE INSULATION ADDED IN Q.7, ASK:

- 9a. What was the cost of insulating your attic floor?
- 1()Less than \$50 2()\$50 - \$99 3()\$100 - \$149 4()\$150 - \$199 5()\$200 - \$249
 - 6()\$250 - \$299 7()\$300 - \$349 8()\$350 - \$399 9()\$400 or more V()Don't know
- 9b. What type of insulation was used? (READ TYPES)
- 1()Batt 2()Blanket 3()Loose fill 4()Foam X()Other V()Don't know
- 9c. What material was used? (READ ANSWERS)
- 1()Fiberglass 2()Cellulose 3()Mineral Wool 4()Foam
 - X()Other, specify _____ V()Don't know
- 9d. How deep was the new insulation that was put in?
- 1()Under 2 inches 2()3 or 4 inches 3()5 or 6 inches
 - 4()7 inches or more V()Can't Say

9e. In which month was the insulation put in?

1()Nov. 1976 2()Dec. 1976 3()Jan. 1977 4()Feb. 5()Mar. 6()Apr. 7()May
8()June 9()July 0()Aug. X()Sept. V()Oct.

1()Nov. 1977 2()Dec. 1977 3()Jan. 1978 -()Don't recall

9f. Was it in the whole attic or only part?

1()Whole attic 2()Part

9g. Did you, another member of your family, or someone you hired put the insulation in your attic floor or crawl space?

1()Self 2()Family member 3()Someone hired

9h. Did you have any problems when the insulation was put in?

1()Yes 2()No

IF "YES" TO Q.9h, ASK:

9i. What were they? _____

IF ATTIC FLOOR OR CRAWL SPACE INSULATION ADDED IN Q.7, ASK:

9j. Are you satisfied with the job or not?

1()Satisfied 2()Not satisfied V()Not sure

ASK EVERYONE:

10. Which of the following kinds of materials do you think your home needs or needs more of?

a. Insulation in your attic floor or crawl space?	1()Yes	2()No	V()Don't know
b. Insulation in the walls of your home?	1()Yes	2()No	V()Don't know
c. Storm windows?	1()Yes	2()No	V()Don't know
d. Storm doors?	1()Yes	2()No	V()Don't know
e. Weather-stripping of doors and windows?	1()Yes	2()No	V()Don't know
f. Caulking of doors and windows?	1()Yes	2()No	V()Don't know
g. Plastic sheeting over windows?	1()Yes	2()No	V()Don't know

11. Which of the following kinds of home materials are you planning to add between now and next summer? (READ LIST)

1()Attic or crawl space insulation 2()Wall insulation 3()Storm doors
4()Storm windows 5()Weather-stripping 6()Caulking 7()Plastic sheeting over windows.
8()Other, specify _____
X()None of them

ASK EVERYONE:

2a. Have you considered and then given up the idea of adding more attic insulation to your home between now and next summer?

1()Yes 2()No

IF "YES" TO Q.12a, ASK:

12b. Why did you decide not to add the attic insulation? _____

IF WALL OR ATTIC INSULATION PLANNED (SEE Q.11), ASK Q.13a.

13a. Do you plan to do the work yourself or have it done by a contractor?

1()Self 2()Contractor 3()Partly by self, partly by contractor V()Not sure

IF RESPONDENT PLANS TO DO WORK HIMSELF (SEE Q.13a), ASK:

13b. If you do the work yourself what additional information do you feel you would need that you don't already have. For example, would you know what type of insulation to buy?

1()Yes, I know 2()No, I would not V()Not sure

13c. Would you know from whom to buy the insulation?

1()Yes, I know 2()No, I would not V()Not sure

13d. Would you know what is a fair price to pay?

1()Yes, I know 2()No, I would not V()Not sure

13e. Would you know how to install the material?

1()Yes, I know 2()No, I would not V()Not sure

13f. Where would you buy the material?

1()Hardware store 2()Home supply center 3()Lumber yard 4()Department store
X()Other, specify _____ V()Don't know

IF RESPONDENT PLANS TO HAVE WORK DONE OR PARTLY DONE BY CONTRACTOR (SEE Q.13a), ASK:

14a. Would you know how to find the names of people who might do the work?

1()Yes, I know 2()No, I don't know V()Not sure

14b. Would you know how to judge the work of the person who does the work?

1()Yes, I know 2()No, I don't know V()Not sure

14c. Would you know what is a fair price to pay for the work?

1()Yes, I know 2()No, I don't know V()Not sure

14d. About how much do you think this insulation you are planning to do will cost?

1()Under \$100 2()\$100 - \$199 3()\$200 - \$299 4()\$300 - \$399
5()\$400 - \$499 6()\$500 or more V()Don't know

14e. Have you talked to any dealer or contractor about this work?

1()Yes 2()No

IF "YES" TO Q.14e, ASK:

f. Did the dealer or contractor say there might be a delay in getting supplies?

1()Yes 2()No

IF ATTIC INSULATION PLANNED (SEE Q.11), ASK:

- 15a. Do you think you will do the attic insulating all at once or do it over a period of time?
 1() All at once 2() Over a period of time V() Don't know
- 15b. Do you expect to take out a loan to pay for this attic insulation, or pay for it with your own available funds?
 1() Take out a loan 2() Pay out of funds V() Don't know
- 15c. What type of attic insulation are you interested in buying?
 1() Batt 2() Blanket 3() Loose fill 4() Foam X() Other V() Don't know
- 15d. What material are you interested in buying?
 1() Fiberglass 2() Cellulose 3() Mineral Wool 4() Foam
 X() Other, specify _____ V() Don't know
- 15e. How certain are you that you will add the attic insulation you mentioned between now and next summer, absolutely certain, fairly certain, or not certain?
 1() Absolutely certain 2() Fairly certain 3() Not certain
- 15f. How much lower do you think your annual fuel bill will be if you put in this attic insulation?
 1() Less than \$50 lower 2() \$50-\$99 lower 3() \$100-\$149 lower 4() \$150-\$199 lower
 5() Over \$200 lower 6() Will not be lower V() Don't know

ASK EVERYONE:

16. If the price of fuel goes up will you be more likely or less likely to add attic insulation?
 1() More likely 2() Less likely 3() About as likely V() Don't know
- 17a. Since last August, have you tried to get attic insulation material?
 1() Yes 2() No

IF "YES" IN Q.17a, ASK Q.17b. IF "NO" IN Q.17a, SKIP TO Q.18.

- 17b. Were you able to get the insulation material you wanted or not?
 1() Yes 2() No

IF "NO" IN Q.17b, ASK:

- 17c. If no, why not? _____

ASK EVERYONE:

18. What sources of information do you rely on most to find out how to insulate your home for the winter? (DO NOT READ OR SUGGEST ANSWERS.)
1()Friend	1()Schools
2()T.V. ad	2()Direct mail
3()T.V. show	3()Utility company
4()Newspaper ad	4()Hardware dealer
5()Newspaper article	5()Point of purchase display
6()Magazine ad	0()Nothing named
7()Magazine article	V()Don't know
8()Radio news	
9()Radio ads	
19. Do you think it would be too much trouble to put more insulation in your attic or not?
1()Yes	2()No	V()Don't know
20. Do you think adding more insulation to your attic floor will help save home heating fuel or not?
1()Yes	2()No	V()Don't know
- 21a. Would you buy \$300 worth of insulation to add to your attic if you could save that much on heating bills in the next 7 years?
1()Yes	2()No	3()Don't need insulation	V()Don't know
- 21b. Would you like your gas or electric utility company to put more insulation in your attic and let you pay for it on time as part of your gas or electric bill?
1()Yes	2()No	3()Don't need insulation	V()Don't know
22. Which of the following would you trust to tell you how much insulation you need or don't need? (READ LIST)
a. The Government	1()Would trust	2()No	V()Don't know
b. Electric or gas utility company	1()Would trust	2()No	V()Don't know
c. Insulation manufacturer	1()Would trust	2()No	V()Don't know
d. Insulation installer	1()Would trust	2()No	V()Don't know
e. Insulation retail store	1()Would trust	2()No	V()Don't know
- 23a. Are you aware of any kinds of financial help from the Government for home insulating materials?
1()Yes	2()No (SKIP TO Q.24a)
- IF "YES" IN Q.23a, ASK:
- 23b. Is that a factor in whether or not you want to install it now?
1()Yes	2()No

ASK EVERYONE:

24a. If the Federal Government were to give you back 20 cents for every dollar of the cost as a tax credit, how likely is it that you would buy attic insulation this winter, very likely, fairly likely or not likely?

1()Very likely 2()Fairly likely 3()Not likely 4()Don't need V()Don't know

24b. How likely would you be to buy storm windows this winter if you got a 20 percent tax credit, very likely, fairly likely or not likely?

1()Very likely 2()Fairly likely 3()Not likely 4()Don't need V()Don't know

25a. Do you think the price of insulation has gone up faster than other home items in the past 12 months or not?

1()Yes 2()No 7()Don't know

25b. Do you think the price of insulation will go up faster than other home items in the next year?

1()Yes 2()No V()Don't know

26. Do you think you will wait until next year to add any more insulation to your attic?

1()Yes 2()No V()Can't Say

27. Do you think there's a real energy problem or do you think that it's talk designed to get more money from consumers for the oil, gas, and electric companies?

1()Real problem 2()Just talk V()Don't know

28. Do you worry about whether natural gas shortages will occur this winter like they did last winter?

1()Yes 2()No V()Don't know

29a. Do you think there will be a serious energy shortage in this country within the next 5 years?

1()Yes 2()No V()Can't Say

IF "NO" OR "CAN'T SAY" IN Q.29a, ASK:

29b. How about the next 10 years?

1()Yes 2()No V()Can't Say

ASK EVERYONE:

30. Do you worry about whether foreign oil producers will suddenly stop their shipments of oil and gasoline to this country, as happened four years ago?

1()Yes 2()No V()Don't know

31. Do most people whom you know try to save energy or are they generally wasteful in their use of gasoline, heating fuel, and electricity?

1()Most try 2()Wasteful V()Don't know

32a. Do you think that saving energy requires you to sacrifice something?

1()Yes 2()No V()Don't know

32b. Are there benefits to being an energy saver?

1()Yes 2()No V()Don't know

33. Do you agree or disagree with the following: I have more important things to spend my money on this winter than more attic insulation.

1() Agree 2() Disagree V() Don't know

- 34a. In which of these types of structures do you live, a single family house, an apartment house, a mobile home or some other type?

1() Single 2() Apartment 3() Mobile home V() Other type

IF "SINGLE FAMILY HOUSE" IN Q.34a, ASK:

- 34b. Is it detached, or an attached row, town house or duplex?

1() Detached 2() Attached row, town house or duplex

ASK EVERYONE:

35. What is the primary fuel used to heat your house? (READ ANSWERS)

1() Oil 2() Natural gas 3() Electricity 4() Other

And now for a few questions so that my office will have some information about the background of each person interviewed.

36. What was the last grade or class you COMPLETED in school?

1() None, grades 1-4 2() Grades 5, 6, 7 3() Grade 8
 4() High School, incomplete, grades 9-11 5() High School graduate, grade 12
 6() Technical, Trade or Business School 7() College or University, incomplete
 8() College or University graduate

37. What type of area do you live in? (READ ANSWERS)

1() City 2() Suburb 3() Small Town 4() Rural Area

38. What is your occupation? _____

39. What is your age? AGE _____

40. INTERVIEWER: PLEASE CHECK WHETHER YOU HAVE SPOKEN TO

1() Man 2() Woman

So that my office can check my work in this interview, if it wants to, may I have your name, address and telephone number?

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

TELEPHONE NUMBER: AREA CODE _____ PHONE NUMBER _____

I hereby attest that this is a true and honest interview.

PLACE
COMPUTER
LABEL
HERE

(INTERVIEWER'S SIGNATURE) _____