TABLE OF CONTENTS

SECTION A:	PREINTERVIEW OBSERVATION	1
SECTION B:	HOUSING TYPE	2
SECTION C:	HOME HEATING	8
SECTION D:	AIR CONDITIONING	16
SECTION E:	WATER HEATING	21
SECTION F:	LIGHTS	25
SECTION G:	APPLIANCES Cooking Refrigerators and Freezers Washer and Dryer Dishwasher/TV/Waterbeds Other Appliances Pools and Hot Tubs	27 29 33 34 35
SECTION H:	CONSERVATION MEASURES AND USAGE Insulation New Technologies Windows/Doors Cooling Fans	38 40 41
SECTION I:	DEMAND SIDE MANAGEMENT	45
SECTION J:	FUEL USED Electricity Natural Gas Bottled Gas (LPG or Propane) Fuel Oil Kerosene Wood Electricity A A A A A A A A A A A A A A A A A A A	48 49 50 51
SECTION K:	FUEL BILLS5Additional Suppliers6Authorization Form6Nonhousehold Uses6	67 68
SECTION L:	BACKGROUND INFORMATION Income	
SECTION M:	PROGRAM PARTICIPATION	80
SECTION N:	VEHICLES 8 Vehicle Identification Number 9	
NEW HOME	SUPPLEMENT	95
SECTION O:	HOUSING MEASUREMENTSGGarage/BasementGMeasurements10	98
SECTION P:	INTERVIEWER OBSERVATION	11

LETTER.

Form Approval: OMB No.: 1905-0092 Expires: June 30, 1996

U.S. Department of Energy

1-4

1993 Residential Energy Consumption Survey

Household Questionnaire



INTRODUCTION TO INTERVIEW	TIME BEGAN:
Hello, I am from Response Analysis Corporation, a social identification. We are conducting a study for the U.S. Department of Energy about	
Although your response is voluntary, we hope you will participate in this importar and address will be kept strictly confidential.	nt study of energy usage. Your name
have some questions I would like to ask the person who rents or owns this res	sidence.
Did you receive the letter from the Department of Energy regarding this surveg LETTER TO THE RESPONDENT.)	y? (IF NOT, HAND A COPY OF THE

GO TO SECTION B ON PAGE 2.

INTERVIEWER: IF ASKED ABOUT CONFIDENTIALITY, REFER THE RESPONDENT TO THE BACK OF THE

Location #:	10-15
Housing Unit #:	16-17

Section A: PREINTERVIEW OBSERVATION

A-1. INTERVIEWER: CIRCLE TYPE OF BUILDING IN WHICH RESPONDENT LIVES	
a. SINGLE-FAMILY DETACHED 2 b. SINGLE-FAMILY ATTACHED (TOWNHOUSE, DUPLEX, OR ROWHOUSE) 3 c. MOBILE HOME OR TRAILER 1> [A-3] d. HOUSE OR BUILDING WITH 2 TO 4 APARTMENT UNITS 4> [A-3] e. HOUSE OR BUILDING WITH 5 OR MORE APARTMENT UNITS 5> [A-3]	18
INTERVIEWER: MARK FOLDOUT PAGE UNDER A-1 "HOUSING STRUCTURE."	
IF SINGLE-FAMILY, RECORD +))))))))))))))))))))))))))))))))))))	
* a. ONE STORY 1 * b. TWO STORIES 2 * c. THREE STORIES 3 * d. SPLIT-LEVEL 4 * e. OTHER (SPECIFY): 5	19
A-3. INTERVIEWER: CIRCLE ONE NUMBER BELOW TO SHOW THE KIND OF AREA THAT THIS HOUSEHOLD IN.) IS
a. CITY 1 b. TOWN 2 c. SUBURBS 3 d. RURAL OR OPEN COUNTRY 4	20

Section B: HOUSING TYPE

B-1.	First, I have some questions about your household so I can better understand your answers to the home energy use questions that come later. Does any other family besides your own or a person unrelated to you share this home/apartment with you?
	YES
	IF "YES" ON B-1, ASK: +))))))))))))))))))))))))))))))))))))
	* a. Live and eat separately from other persons in the apartment or building?
	* YES
	 b. Have direct access from outside the building or through a common hall?
	* YES
В	OX 1
	TERVIEWER: IF THE ANSWERS IN B-2 ARE BOTH "YES", THEN THIS ADDRESS HAS <u>SEPARATE LIVING</u> <u>JARTERS</u> . FOLLOW THESE INSTRUCTIONS:
	- WRITE THE ADDRESS FOR THE SEPARATE LIVING QUARTERS ON YOUR HOUSING UNIT ADDRESS LIST.
	- SEE THE SAMPLING INSTRUCTIONS IN YOUR TRAINING MANUAL TO DETERMINE WHETHER AN ADDITIONAL INTERVIEW SHOULD BE COMPLETED.
	CHECK ONE OF THESE AND PROCEED AS INSTRUCTED:
	YES, AN ADDITIONAL INTERVIEW IS REQUIRED. READ TO RESPONDENT "Please exclude the family members and the space of the separate living quarters from this interview."
	NO, AN ADDITIONAL INTERVIEW IS <u>NOT</u> REQUIRED. READ TO RESPONDENT "Please <u>include</u> the family members and the space of the separate living quarters in this interview."

B-3. Do you or members of your household own this home or do you rent?

	a. OWN/BUYING 1 b. RENT 2 c. OCCUPIED WITHOUT PAYMENT OF RENT 3	24
	INTERVIEWER: MARK FOLDOUT PAGE UNDER B-3 "TENURE".	
B-4. I	s this home/apartment part of a condominium or cooperative?	
	YES, CONDOMINIUM	25
	INTERVIEWER: IF "CONDOMINIUM," MARK B-4 UNDER "CONDOMINIUM" ON FOLDOUT PAGE.	I
:	IF "RENT," OR "OCCUPIED WITHOUT PAYMENT OF RENT" ON B-3, ASK; OTHERWISE> [B-7]: ++)))))))))))))))))))))))))))))))))))	26
	IF "NO" OR "DON'T KNOW" ON B-5, ASK: +))))))))))))))))))))))))))))))))))))	
	* YES	27

INTERVIEWER: MILITARY HOUSING DOES NOT QUALIFY AS PAYING LOWER RENT FOR QUESTION B-6.

B-7. Please turn to Exhibit B-7. Approximately, in what year was this (house/building) built?

BEFORE 1940	01	1988	09	
1940-1949	02	1989	10	
1950-1959	03	1990		
1960-1969	04	1991		29
1970-1979	05	1992	13	
1980-1984	06	1993		
1985-1986	07	1994		
1987	08			

INTERVIEWER: IF BUILT IN 1988 OR LATER, MARK UNDER B-7 "BUILT 1988 OR LATER" ON FOLDOUT PAGE.

B-8. Did your household move into this home/apartment after December 1991?

YES	 30
NO.	

IF "YES" ON B-8, ASK:

*B-9. In what year and month did your household move in?

*		
*	YEAR	
*	1992	
*	1993	31
*	1994	
*	MONTH	
*	JANUARY 01 JULY 07	
*	FEBRUARY 02 AUGUST 08	
*	MARCH 03 SEPTEMBER	32-33
*	APRIL 04 OCTOBER 10	
*	MAY 11	
*	JUNE 12	

INTERVIEWER: IF "1993 or 1994" MARK UNDER B-9 "YEAR MOVED IN" ON FOLDOUT PAGE.

B-10. How many of each of the following rooms does this home/apartment have? (ASK EACH ITEM AND RECORD NUMBER FOR EACH.)

	ER: FOR ONE-ROOM EFFICIENCY (NUMBER OF BATHROOMS.	OR STUDIO APARTMENT, RECORD "O BEDROOMS" AND
ć	a. Bedrooms?	NUMBER:
SHOWER.	ER: FULL BATHROOM SINK WIT	H RUNNING WATER <u>AND</u> FLUSH TOILET <u>AND</u> BATHTUB OR
HALF DATE	INOOIVI TOILET <u>ON</u> DATHTUD <u>OP</u>	<u></u>
k	o. Full bathrooms?	NUMBER: 0
(c. Half bathrooms?	NUMBER:
C	d. All other rooms; do <u>not</u> count laundry room, foyers, or unfinished storage space. Only count porches if they are enclosed and used year-round.	NUMBER:
		or type of outside wall construction material for this USED, CIRCLE THE ONE USED MORE.
k 0 6 f () i	D. WOOD	

B-12. Is natural gas from underground pipes available in this neighborhood?	
YES 1	
NO) 4

THIS PAGE INTENTIONALLY LEFT BLANK.

SECTION C: HOME HEATING

MAIN SPACE HEATING

C-1. Please turn to Exhibit C-1. What is the one main equipment used for heating your home?

INTERVIEWER: CIRCLE ONLY ONE UNDER C-1.

C-2. Please turn to the "Blue Card". For the main heating equipment in your home, what type of fuel or fuels does your household use with that equipment?

INTERVIEWER: ASK ABOUT MAIN HEATING FUELS EVEN IF EQUIPMENT IS NOT KNOWN.

SHADED CELLS INDICATE FUEL NOT USED IN THAT TYPE OF EQUIPMENT.

MAIN HEATING FUELS AND EQUIPMENT

C-1.					C-2	. [C	IRC	LE /	ALL	THAT APPLY]		Ī
M A I N E Q U I P M E N T	MAIN HEATING EQUIPMENT 41-42	E L E C T R I C I T Y	NATURAL GAS	LPG/PROPANE	FUEL OIL	K E R O S E N E	WO O D	C O A L Or C O K E	S O L A R	OTHER SPECIFY:	DONT KNOW FUEL	
03	a. CENTRAL WARM-AIR FURNACE WITH DUCTS TO INDIVIDUAL ROOMS (NOT Heat Pump)	05	01	02	03	04	07	06	08	21	96	
02	b. STEAM/HOT WATER SYSTEM WITH RADIATORS/CONVECTORS IN ROOM OR PIPES IN FLOOR	05	01	02	03	04	07	06	08	21	96	
05	c. BUILT-IN ELECTRIC UNITS (Permanently installed in wall, ceiling, or baseboard.)	05									96	
04	d. HEAT PUMP	05									96	
06	e. FLOOR/WALL/PIPELESS FURNACE - NOT PORTABLE	05	01	02	03	04	07	06		21	96	43-48
07	f. ROOM HEATER (Burning Gas, Oil, or Kerosene.) - NOT PORTABLE		01	02	03	04					96	
08	g. HEATING STOVE BURNING WOOD, COAL OR COKE						07	06		21	96	
10	h. PORTABLE ELECTRIC HEATER(S)	05									96	
11	i. PORTABLE KEROSENE HEATER(S)					04					96	
09	j. FIREPLACE(S)	05	01	02			07	06		21	96	
12	k. COOKING STOVE (Used to heat home as well as for cooking.)	05	01	02	03	04	07	06		21	96	
21	I. EQUIPMENT NOT LISTED	05	01	02	03	04	07	06	80		96	
	(SPECIFY):>											
96	m. DON'T KNOW EQUIPMENT	05	01	02	03	04	07	06	08	21	96	
00	n. NO HEATING EQUIPMENT USED> [D-1]											

INTERVIEWER: IF TWO FUELS ARE MARKED FOR MAIN EQUIPMENT, WRITE HERE THE FUEL THAT PROVIDES MORE HEAT:______.

RECORD ON FOLDOUT PAGE. FOR ALL FUELS CIRCLED IN C-2, CIRCLE "1" IN "FUEL USED" COLUMN. ALSO, IF ELECTRICITY OR NATURAL GAS "FOR HOME HEATING", CIRCLE "1" FOR "YES" IN "USAGE" COLUMN.

49-50 C-3. Please turn back to Exhibit C-1. What other types of heating equipment are used in your home, including those that are used JUST occasionally?

INTERVIEWER: FOR "OTHER HEATING FUELS AND EQUIPMENT" GRID ON NEXT PAGE, CIRCLE ALL THAT APPLY UNDER C-3.

C-4. Please turn to the "Blue Card". For each type of other heating equipment that you have, I'm going to ask you what type of fuel or fuels you use with that equipment. Let's start with...?

INTERVIEWER: READ EACH TYPE OF EQUIPMENT MENTIONED IN C-3, CIRCLE TYPE OF FUEL USED. IF "NO OTHER HEATING EQUIPMENT" IS USED, CIRCLE "00" UNDER C-3 AND SKIP TO C-6.

ASK ABOUT SUPPLEMENTAL HEATING FUELS EVEN IF EQUIPMENT IS NOT KNOWN.

SHADED CELLS INDICATE FUEL NOT USED IN THAT TYPE OF EQUIPMENT.

OTHER HEATING FUELS AND EQUIPMENT

C-3.	. C-4. [CIRCLE ALL THAT APPLY]											
OTHER EQUIP	OTHER HEATING EQUIPMENT	E L E C T R I C I T Y	N A T U R A L G A S	L P G / P R O P A N E	F U E L O I L	K E R O	WO O D	C O A L	S O L A	OTHER SPECIFY:	DONT KNOW FUEL	
00	a. NO OTHER HEATING EQUIPMENT USED> [0	C-6]									61-62
03	b. CENTRAL WARM-AIR FURNACE WITH DUCTS TO INDIVIDUAL ROOMS (NOT Heat Pump)	05	01	02	03	04	07	06	80	21	96	63-70
02	c. STEAM/HOT WATER SYSTEM WITH RADIATORS/CONVECTORS IN ROOM OR PIPES IN FLOOR	05	01	02	03	04	07	06	80	21	96	71-78
05	d. BUILT-IN ELECTRIC UNITS (Permanently installed in wall, ceiling, or baseboard.)	05									96	79-82
04	e. HEAT PUMP	05									96	83-86
06	f. FLOOR/WALL/PIPELESS FURNACE - NOT PORTABLE	05	01	02	03	04	07	06		21	96	87-94
07	g. ROOM HEATER (Burning gas, oil, or Kerosene.) - NOT PORTABLE		01	02	03	04					96	95-102
80	h. HEATING STOVE BURNING WOOD, COAL OR COKE						07	06		21	96	103-110
10	i. PORTABLE ELECTRIC HEATER(S)	05									96	111-114
11	j. PORTABLE KEROSENE HEATER(S)					04					96	115-118
09	k. FIREPLACE(S)	05	01	02			07	06		21	96	119-126
12	 COOKING STOVE (Used to heat home as well as for cooking.) 	05	01	02	03	04	07	06		21	96	127-134
21	m. OTHER EQUIPMENT	05	01	02	03	04	07	06	80		96	135-142
	(SPECIFY):>											
96	n. DON'T KNOW EQUIPMENT	05	01	02	03	04	07	06	80	21	96	143-150

INTERVIEWER: RECORD ON FOLDOUT PAGE. FOR ALL FUELS CIRCLED IN C-4, CIRCLE "1" IN "FUEL USED" COLUMN. IF ELECTRICITY OR NATURAL GAS, ALSO CIRCLE "1" FOR "YES" "FOR HOME HEATING" IN "USAGE" COLUMN.

	FING EQUIPMENT USED, ASK: OTHERWISE> [C-6]:	
	ck to your main heating equipment - (EQUIPMENT FROM C-1). Does this equipment	
	or almost all of the heat for your home, about three-fourths, or closer to half	
	t for your home?	
*	tion your nome?	
* /	ALL OR ALMOST ALL (MORE THAN 95%) 1	
* /	ABOUT THREE-FOURTHS (67%-94%)	195
* (NDOUT THREE-FOURTHS (07 %-74 %)	195
* -	CLOSER TO HALF (66% OR LESS)	
" L	DON'T KNOW	
IF "SOLAR HEA"	TING" ON C-2 OR C-4, ASK; OTHERWISE> [C-7]:	
))))))))))))))))))	
	r solar heating system <u>REQUIRE</u> pumps or fans (other than ceiling fans) to circulate	
	or hot fluids between solar collectors and the rooms they heat?	
*	The that are better some consister and the recent and the first	
*	/FS 1	
* \	/ES	196
	CONIT (ALOM)	.50

HOME TEMPERATURES

C-7.	At what <u>te</u>	emperature does your household usually keep your home in the winter?	
	a	a. During the day, when someone is at home?	
		DEGREES FAHRENHEIT: 2 HEAT TURNED OFF	205-6
	b	b. During the day, when no one is at home?	
		DEGREES FAHRENHEIT: 2 HEAT TURNED OFF	207-8
	С	c. During sleeping hours?	
		DEGREES FAHRENHEIT: 20 HEAT TURNED OFF	09-10
TEN IF, F DO'	MPERATU FOR EXAM WNSTAIR	ER: IF RESPONDENT KEEPS DIFFERENT PARTS OF THE HOUSE AT DIFFERENT JRES, WE WANT THE TEMPERATURE IN THE PART OF THE HOUSE WHERE THE PEOPLE ARE MPLE, THE HEAT IS TURNED OFF UPSTAIRS DURING THE DAY BECAUSE THE FAMILY IS RS, WE WANT THE DOWNSTAIRS TEMPERATURE. PONDENT DOESN'T KNOW THE TEMPERATURE, BUT KNOWS THERMOSTAT SETTING,	Ξ.
REC	CORD TH	HERMOSTAT SETTING. OTHERWISE, PROBE FOR BEST ESTIMATE.	
		ok at Exhibit C-8. For your main heating equipment, can you use a thermostat to adjust the tempera ome during the heating season?	ature
		YES	211

INTERVIEWER: IF NEEDED, PLEASE READ "A thermostat automatically responds to temperature changes and turns the heat on/off until the desired temperature is reached."

C-9. Please turn to the "Yellow Card". Approximately, how old is your household's main heating equipment?

LESS THAN 2 YEARS OLD 1 2 - 4 YEARS OLD 2 5 - 9 YEARS OLD 3> [C-16] 10 - 19 YEARS OLD 4> [C-16] 20 YEARS OR OLDER 5> [C-16] DON'T KNOW 6> [C-16]	212
IF MAIN HEATING EQUIPMENT LESS THAN 5 YEARS OLD, ASK; OTHERWISE> [C-16] +))))))))))))))))))))))))))))))))))))	
* YES, PURCHASED REPLACEMENT	213
IF "CAME WITH HOME PURCHASE" ON C-10, ASK: +))))))))))))))))))))))))))))))))))))	
* HOUSEHOLD SELECTED	214
+)))))))))))))))))))))))))))))))))))))	
* VERY WELL 1 * WELL 2 * NOT WELL 3 * NOT WORKING AT ALL 4 * DID NOT HAVE HEATING SYSTEM BEFORE/ * WAS NOT REPLACED 5> [C-15] * DON'T KNOW 6	215

+)))))))))))))))))))))))))))))))))))))	e fuel as the he	eating equipme	ent it replaced?	>			
* YES			0		216		
* *C-14. How do you like your new heating system of than the old, the same, or did you like the of the same.			you like it bet	ter			
* LIKE IT SAME AS OLD	LIKE IT SAME AS OLD						
* *C-15. Thinking back to why your household decic * Please tell me, for each of the following reases somewhat important, or not important to you	sons, whether i				-		
	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT	DON'T KNOW			
a. Purchase Pricea.	1	2	3	6	218		
b. Reputation of Manufacturer b.	1	2	3	6	219		
c. Energy Efficiency	1	2	3	6	220		
d. Rebate or Availability of Low- Interest Financing d.	1	2	3	6	221		
INTERVIEWER: AS C-16. Does the main system for heating your hom			r apartments,				
condos, households, businesses, or farm b	ouildings?		·				
YES	SPONDENT'S		0		222		

Section D. AIR CONDITIONING

	oes your household have air-conditioning equipment (either a central system with, or without a heat pump all, or window units?) CIRCLE ALL THAT APPLY.	, or
	YES, CENTRAL SYSTEM WITHOUT A HEAT PUMP	232 233 234 235
INTE	RVIEWER: RECORD ON FOLDOUT PAGE.	
	LE ON THE FOLDOUT PAGE UNDER ELECTRICITY "FOR AIR-CONDITIONING", CIRCLE "1" FOR "YES" ER "USAGE" COLUMN IF INDIVIDUAL "WINDOW OR WALL UNITS."	
	ast summer did your household's air-conditioning (central or window/wall units) cool your entire house or so the rooms?	me
	ENTIRE HOUSE OR APARTMENT $1> [D-4]$ SOME OF THE ROOMS 2 DID NOT LIVE HERE LAST SUMMER $3> [D-4]$ NO ROOMS COOLED $0> [D-4]$	236
+	F "SOME OF THE ROOMS" ON D-2, ASK: (1))))))))))))))))))))))))))))))))))))	
* *	NUMBER OF ROOMS:	37-8

CENTRAL AIR-CONDITIONING

INTERVIEWER: IF "CENTRAL SYSTEM" ON D-1, ASK. OTHERWISE SKIP TO BOX 2, PAGE 20.

D-4.	Please turn to Exhibit D-4. Which statement on this exhibit <u>best</u> describes the way your household used the central air-conditioner(s) last summer?
	DID NOT USE AT ALL TURNED ON ONLY A FEW DAYS OR NIGHTS WHEN REALLY NEEDED TURNED ON QUITE A BIT TURNED ON JUST ABOUT ALL SUMMER NOT HERE LAST SUMMER OTHER (SPECIFY): 5
D-5.	Does your household's central air-conditioner run on electricity or is it one of the few that uses natural gas or bottled gas? (DO NOT COUNT FREON AS GAS)
	ELECTRICITY
	INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "FUEL USED" COLUMN IF FUEL NOT ALREADY MARKED.
	ALSO, IF ELECTRICITY, "FOR AIR CONDITIONING," CIRCLE "1" FOR "YES" UNDER THE "USAGE" COLUMN.
	IF NATURAL GAS, "FOR OTHER" APPLIANCES CIRCLE "1" FOR "YES" UNDER THE "USAGE" COLUMN.
D-6.	Does your household's central air-conditioning equipment that cools your home also cool other apartments, condos, houses, businesses, or farm buildings?
	NO, A/C IS FOR RESPONDENT'S HOME ONLY

+)))))))))	FOR RESIDENTS HOME ONLY" ON D-6, ASK: ()))))))))))))))))))))))))))))))))))	
* * * * * * * * * * *	LESS THAN 2 YEARS OLD 1 2 - 4 YEARS OLD 2 5 - 9 YEARS OLD 3> [BOX 2] 10 - 19 YEARS OLD 4> [BOX 2] 20 YEARS OR OLDER 5> [BOX 2] DON'T KNOW 6> [BOX 2]	243
* equipmer	anuary 1, 1990, has your household purchased <u>new</u> central air-conditioning nt for this home or acquired new central air-conditioning as part of hase of a new home?	
* * * *	YES, PURCHASED FOR EXISTING HOME 1> [D-10] YES, CAME WITH HOME PURCHASE 2 NO 0> [BOX 2] DON'T KNOW 6> [BOX 2]	244
+))))))) *D-9. Did	WITH HOME PURCHASE" ON D-8, ASK:)))))))))))))))))))))))))))))))))))	
* * *	$ \begin{array}{llllllllllllllllllllllllllllllllllll$	245
+))))))) *D-10. Di * rep	HASED FOR EXISTING HOME" ON D-8, ASK: ()))))))))))))))))))))))))))))))))))	
* * * * * * *	REPLACED CENTRAL UNIT 1 REPLACED WINDOW/WALL UNIT 2 ADDITIONAL EQUIPMENT 3> [D-12] NO EQUIPMENT BEFORE 4> [D-12] DON'T KNOW 6> [D-12]	246

+)))))))))))))))))))))))))))))))))))))	Vorumoll
*D-11. How well was the old air-conditioner working when you replaced it?	very well,
* well, not well, or not working at all?	
*	
* VERY WELL	1
* WELL	2
* NOT WELL	3 247
* NOT WORKING AT ALL	4
* DON'T KNOW	6

comemia, imperiant, or net imperial.					1
	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT	DON'T KNOW	
a. Purchase Pricea.	1	2	3	6	248
b. Reputation of Manufacturer b.	1	2	3	6	249
c. Energy Efficiency c.	1	2	3	6	250
d. Rebate or Availability of Low-					
Interest Financingd.	1	2	3	6	251

^{*}D-12. Thinking back to why your household decided to purchase this new air-conditioner.

* Please tell me, for each of the following reasons, whether it was very important,

* somewhat important, or not important to your decision.

WINDOW/WALL AIR-CONDITIONING

BOX	2

INTI	ERVIEWER:	IF "INDIVIDUAL WINDOW/WALL UNITS" ON D-1, ASK. OTHERWISE SKIP TO E-1, PAGE	<u> 21.</u>
D-13.	How many	y window or wall air-conditioning units does your household have?	
		NUMBER OF WINDOW/WALL UNITS:	252-3
D-14.	(Is the wind	dow/wall air conditioner a heat pump?) How many of the window/wall air-conditioners umps?	
		NO/NONE 0 YES/ONE 1 TWO 2 THREE OR MORE 3 DON'T KNOW 6	254
D-15.		n to the "Yellow Card". About how old is your household's MOST-USED unit? ed" is the unit that is used more often than any other unit.	
		LESS THAN 2 YEARS 1 2 - 4 YEARS 2 5 - 9 YEARS 3 10 - 19 YEARS 4 20 YEARS OR OLDER 5 DON'T KNOW 6	255
D-16.		ok at Exhibit D-16. Which statement <u>best</u> describes the way your nold used the (most used) wall or window unit air conditioner(s) last summer?	
		DID NOT USE AT ALL	256

ONE.

Section E. WATER HEATING

E-1. Please turn to the "Blue Card". Which fuel is used most for heating water for washing or bathing? CIRCLE ONLY

ELECTRICITY 05 NATURAL GAS (GAS FROM UNDERGROUND PIPES) 01 BOTTLED GAS (LPG OR PROPANE) 02 FUEL OIL 03 KEROSENE OR COAL OIL 04 26 COAL OR COKE 06 WOOD 07 SOLAR 08 OTHER (SPECIFY): 21 DON'T KNOW 96 NO WATER HEATING DONE FOR WASHING/BATHING 00> [F-1]	66-67
INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" UNDER "FUEL USED" IF FUEL NOT ALREADY MARKED.	
ALSO, IF ELECTRICITY OR NATURAL GAS, "FOR HOT WATER" CIRCLE "1" FOR "YES" UNDER "USAGE" COLUMN.	
E-2. Does the main equipment for heating water for your home also heat water for other apartments, condos, hou businesses, or farm buildings? NO, HOT WATER EQUIPMENT IS FOR RESPONDENT'S HOME ONLY YES 1> [E-9] DON'T KNOW 6> [E-9]	268

 SMALL (30 GALLONS OR LESS)
 1

 MEDIUM (31 TO 49 GALLONS)
 2

 LARGE (50 GALLONS OR MORE)
 3

269

IF "NO, HOT WATER EQUIPMENT IS FOR RESPONDENT'S HOME ONLY" ON E-2, ASK:

*E-3. Please turn to Exhibit E-3. How large is your household's main water heater tank?

+)))))))))))))))))))))))))))))))

E-4.	Please look at the "Yellow Card". Approximately how old is your household's main water heater? (INTERV PROBE FOR BEST GUESS.)	EWER:
	LESS THAN 2 YEARS 1 2 - 4 YEARS 2 5 - 9 YEARS 3> [E-9] 10 - 19 YEARS 4> [E-9] 20 YEARS OR MORE 5> [E-9] DON'T KNOW 6> [E-9] NO SEPARATE WATER HEATER 0> [E-9]	270-71
E-5.	Since January 1, 1990, has your household purchased a <u>new</u> main water heater either to replace an old or as part of the purchase of a new home?	der one
	YES, PURCHASED REPLACEMENT 1> [E-7] YES, CAME WITH HOME PURCHASE 2 NO 0> [E-9] DON'T KNOW 6> [E-9]	272
	IF "CAME WITH HOME PURCHASE" ON E-5, ASK: +))))))))))))))))))))))))))))))))))))	
	* HOUSEHOLD SELECTED	273
	IF "PURCHASED REPLACEMENT" ON E-5, ASK: +))))))))))))))))))))))))))))))))))))	
	* YES	274

+)	١,	١,	١,	١,	١,	١,	١,	١,	١,	١.	١.	١.	١.	١.	١.	١,	١,	١,	١,	١,	١,	١,	١,	١.	١,	١,	ኅ
+)	Ι.	Ι.	,	,	Ι.	,	,	,	,	,	,	,	,	,	,	Ι.	Ι.	,	,	,	,	,	,	,	Ι.	, ,	Ų

- *E-8. Think back to why your household decided to purchase this new water heater. Please
- * tell me, for each of the following reasons, whether it was very important, somewhat

*	important.	or not important	to vour	decision.

	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT	DON'T KNOW	
a. Purchase Price a.	1	2	3	6	275
b. Immediate Availabilityb.	1	2	3	6	276
c. Energy Efficiency	1	2	3	6	277
d. Rebate or Availability of Low- Interest Financing d.	1	2	3	6	278

E-9. Please turn to Exhibit E-9. The following questions will help us learn about your household's hot water usage. How many baths or showers are taken in the household in a week? Please be sure to count all the times a bath or shower is used by anyone in the house.

9 OR FEWER A WEEK 1	
10 - 20 A WEEK	279
21 OR MORE A WEEK 3	
DON'T KNOW	

E-10. In addition to (FUEL FROM E-1), does your household use any other fuel for heating water for washing or bathing?

YES	 	 	1	280
NO	 	 	0> [F-1]	

+)))))))))))))))))))))))))))Q	
*E-11. Ple	ease turn to the "Blue Card." What is this additional water heating fuel?	
*	Č	
*	ELECTRICITY	
*	NATURAL GAS (GAS FROM UNDERGROUND PIPES) 01	
*	BOTTLED GAS (LPG OR PROPANE)	
*	FUEL OIL	
*	KEROSENE OR COAL OIL	281-82
*	COAL OR COKE	
*	WOOD 07	
*	SOLAR 08	
*	OTHER (SPECIFY):	
*	DON'T KNOW	

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR "FUEL USED" IF FUEL NOT ALREADY CIRCLED.

ALSO, IF ELECTRICITY OR NATURAL GAS USED "FOR HOT WATER", CIRCLE "1" FOR "YES" UNDER THE "USAGE" COLUMN ON THE FOLDOUT PAGE.

Section F. LIGHTS

INDOOR LIGHTS

F-1. Please turn to Exhibit F-1. Thinking of a typical November weekday, please tell me the number of indoor lights your household has turned on for each of the following time periods.

	F-1. NUMBER OF LIGHTS	F-2. NUMBER OF FLUORESCENT LIGHTS	
a. Mara than 10 haura nar day			293-96
a. More than 12 hours per day	NONE 00	NONE00	
b. Between 4 hours and 12 hours per day			297- 300
		NONE00	
			301-04
c. Between 1 hour and 4 hours per day	NONE 00	NONE00	

OUTDOOR LIGHTS

F-3. Please turn to Exhibit F-3. Thinking about a typical November weekday, please indicate <u>all</u> the statements that describe the outdoor lights used by your household.

	<u>YES</u>	NO	
a.	NO OUTDOOR LIGHTS OR RARELY USED	0	305
b.	OUTDOOR LIGHTS TURNED ON DURING THE EVENING,		
	BUT TURNED OFF BEFORE BEDTIME	0	306
C.	OUTDOOR LIGHTS LEFT ON ALL NIGHT	0	307
d.	OUTDOOR LIGHTS WITH A TIMER, MOTION SENSOR,		
	OR PHOTOSENSOR	0	308
e.	OUTDOOR GAS LIGHT 1	0	309
f.	HIGH INTENSITY DISCHARGE (HID) OUTDOOR LIGHTS,		
	SUCH AS METAL HALIDE OR HIGH PRESSURE		
	SODIUM LIGHTS	0	310
g.	TOTAL WATTAGE OF ALL OUTDOOR LIGHTS IS LESS		
	THAN 150 WATTS	0	311
h.	DON'T KNOW	0	312

INTERVIEWER: RECORD ON FOLDOUT PAGE. IF GAS OUTDOOR LIGHT, CIRCLE "1" FOR "YES" ON THE "USAGE" COLUMN UNDER NATURAL GAS "FOR OTHER APPLIANCES."

Section G. APPLIANCES

COOKING

G-1. Turn to the "Blue Card". What fuel is used most for cooking in your home/apartment?

ELECTRICITY 05	
NATURAL GAS (GAS FROM UNDERGROUND PIPES) 01	
BOTTLED GAS (LPG OR PROPANE)	
FUEL OIL 03	
KEROSENE OR COAL OIL 04	331-32
COAL OR COKE	
WOOD 07	
SOLAR	
OTHER (SPECIFY): 21	
DON'T KNOW	
NO COOKING DONE	

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR "FUEL USED" IF FUEL NOT ALREADY CIRCLED.

ALSO, IF ELECTRICITY OR NATURAL GAS, "FOR COOKING" CIRCLE "1" FOR "YES" UNDER THE "USAGE" COLUMN.

G-2. Please turn to Exhibit G-2. Which of these categories best describes, on average, how often hot meals are usually cooked in your home?

а	. 2 OR MORE TIMES A DAY	1
b	ONCE A DAY	2
С	. A FEW TIMES PER WEEK	3
C	. ABOUT ONCE A WEEK	4
е	LESS THAN ONCE A WEEK	5
f.	DON'T KNOW	6

333

G-3. Please turn to Exhibit G-3. Which of the following equipment is used for cooking in your home/apartment?

G-3. COOKING EQUIPMENT USED	YES	NO	G-4. TYPE OF FUEL USED		
a. Stovetop or Burners (DO NOT INCLUDE GAS GRILLS)	1	0	Electricity Natural Gas Bottled Gas (LPG or Propane) Other	. 1	335-36
b. Oven (NOT MICROWAVE OR TOASTER OVEN)	1	0	Electricity Natural Gas Bottled Gas (LPG or Propane) Other	. 1 2	340-41
c. Toaster Oven344	1	0			
d. Outdoor Gas Grill	1	0	Natural Gas Bottled Gas (LPG or Propane)		346
e. Microwave Oven	1	0			

NTERVIEWER: FOR STANDARD COMBINATION UNITS, OVEN AND STOVETOP, RECORD BOTH AS "YES".

FOR EACH "YES" ON G-3, ASK:
+))))))))))))))))))))))))))))))))*
*G-4. Which fuel is used for (COOKING EQUIPMENT)?
))))))))))))))

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR "FUEL USED" IF FUELS NOT ALREADY CIRCLED.

DO NOT MARK BOTTLED GAS (LPG OR PROPANE) IF ONLY USE OF BOTTLED GAS (LPG OR PROPANE) IS FOR AN OUTDOOR GRILL.

ALSO, IF ELECTRICITY OR NATURAL GAS "FOR COOKING" CIRCLE "1" FOR "YES" UNDER THE "USAGE" COLUMN.

REFRIGERATORS AND FREEZERS

G-6. How many refrigerators in your home are used either regularly or occasionally?	
ONE 1 TWO 2 THREE OR MORE 3 NONE 0	350
INTERVIEWER: CIRCLE COLUMNS A AND B ON PAGE 31 IF TWO OR MORE REFRIGERATORS. CIRCLE ONLY COLUMN A ON GRID IF ONE REFRIGERATOR.	
G-7. Does your household use a <u>separate</u> freezer that is not part of the refrigerator?	
YES	351
INTERVIEWER: CIRCLE COLUMN C ON GRID IF "YES"	
IF "YES" ON G-7, ASK: +))))))))))))))))))))))))))))))))))))	
* ONE	352
BOX 3	
IF ONLY ONE REFRIGERATOR, ASK COLUMN A	
IF MORE THAN ONE REFRIGERATOR, ASK COLUMNS A AND B READ FOR COLUMN "A": "Let's start with the refrigerator used most often."	
READ FOR COLUMN "B": "Next I'd like to ask the same questions for the second most used refrigerator."	
IF MORE THAN ONE FREEZER, ASK ABOUT THE LARGEST ONE.	
IF NO REFRIGERATOR OR FREEZER, SKIP TO G-22.	

ASK ALL FOR COLUMN "A" BEFORE GOING ON TO COLUMN "B" OR "C"

COLUMN:	Α	В	С
	(Most Used) Refrigerator	Second Most Used Refrigerator	(Largest) Freezer
G-9. Please look at the top of Exhibit G-9. How old is your household's (COLUMN A, B or C)?	353	358	363
a. LESS THAN 2 YEARS OLD a. b. 2-4 YEARS OLD b. c. 5-9 YEARS OLD c. d. 10-19 YEARS OLD d. e. 20 YEARS OLD OR MORE e. f. DON'T KNOW f.	2 3 4	1 2 3 4 5 6	1 2 3 4 5 6
G-10. Please look at the bottom of Exhibit G-9. What is the size of your household's (COLUMN A, B, or C)?	354	359	364
a. VERY SMALL (10 CUBIC FEET OR LESS) a. b. SMALL (11-14 CUBIC FEET) b. c. MEDIUM (15-18 CUBIC FEET) c. d. LARGE (19-22 CUBIC FEET) d. e. VERY LARGE (23+ CUBIC FEET) e. f. DON'T KNOW f.	2 3 4 5	1 2 3 4 5 6	1 2 3 4 5 6
G-11. Please turn to Exhibit G-11. What type is your household's (COLUMN A or B)?	355	360	
a. HALF-SIZE OR QUARTER a. b. REGULAR WITH SINGLE DOOR b. c. TWO DOORS - TOP AND BOTTOM c. d. TWO DOORS - SIDE BY SIDE d. e. OTHER (SPECIFY:)	2 3 4	1 2 3 4 5 6	
G-12. What type of defrosting does your household's (COLUMN A, B, or C) have, manual or frost-free?	356	361	365
a. MANUAL DEFROST	1 2 3 6	1 2 3 6	1 2 """" 6

CONTINUE ON NEXT PAGE

	our household's most-used refrigerator have a h-the-door ice service? (COLUMN A only)	367		
	a. D b.	1 0		
	any months in 1993 was the second most used ator turned on? (COLUMN B only)		368	
b. 4 c. 7	-3 Months a. l-6 Months b. l-9 Months c. 0-12 Months d.		1 2 3 4	
G-15. Is the fro	eezer an upright or chest model? (COLUMN C only).			369
	IN UPRIGHT (VERTICAL CABINET WITH DOOR ON FRONT)a. A CHEST-TYPE (HORIZONTAL CABINET WITH			1
	DOOR ON TOP)			2
G-16. Since January 1, 1990, has your household purchased a <u>new</u> refrigerator to replace an older one, or as part of the epurchase e of a new home?				
	YES, PURCHASED REPLACEMENT		2	371
+))))))) *G-17. Di	CAME WITH HOME PURCHASE" IN G-16, ASK:)))))))))))))))))))))))))))))))))))	andard with th	ne newly	

COLUMN:

C

(Largest)

Freezer

373

В

Second Most Used

Refrigerator

(Most Used)

Refrigerator

STANDARD WITH NEW HOME 0 --> [G-22]

purchased home?

IF "YES, PURCHASED REPLACEMENT" ON G-16, ASH+))))))))))))))))))))))))))))))))))))		s most-used r	refrigerator?		
* YES				[G-21]	374
*G-19. What did your household do with the old refrige	rator?				
* USE AS SECOND REFRIGERATOR * SOLD, GAVE AWAY, OR DONATED TO	CHARITY				375
* *G-20. How well was the old refrigerator working when * Very well, well, not well, or not working at all. *	your househ	old bought th	ne new one?		
* VERY WELL * WELL * NOT WELL * NOT WORKING AT ALL * DON'T KNOW					376
 *G-21. Think back to why your household decided to p * Please tell me, for each of the following reasons, * somewhat important, or not important to your decided to p 	whether it w				
	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT	DON'T KNOW	
a. Purchase Pricea.	1	2	3	6	377
b. Sizeb.	1	2	3	6	378
c. Energy Efficiency	1	2	3	6	379
					I

WASHER AND DRYER

G-22. Does you	r household <u>use</u> a clothes washer in your home/apartment?	
	YES	3 81
	: DO NOT INCLUDE COMMUNITY WASHERS AND DRYERS THAT ARE LOCATED IN THE R LAUNDRY ROOM OF APARTMENT BUILDING.	
+))))))) *G-23. Ple	N G-22, ASK:)))))))))))))))))))))))))))))))))))	382
a.		383 384 385 386

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR APPROPRIATE "FUEL USED" IF NOT ALREADY CIRCLED.

ALSO, IF NATURAL GAS DRYER, "FOR OTHER APPLIANCES" CIRCLE "1" FOR "YES" UNDER "USAGE" COLUMN.

DISHWASHER

G-25. Does y	our household <u>use</u> an automatic dishwasher?	
	YES	387
+)))))	"ON G-25, ASK:))))))))))))))))))))))))))))))))))))	388
T V		
G-27. How m	nany color television sets does your household <u>use</u> ?	
	COLOR TV SETS NUMBER:	389
G-28. How m	nany black and white television sets does your household <u>use</u> ?	
	BLACK AND WHITE TV SETS NUMBER:	390
WATER	BEDS	
G-29. Does y	our household <u>use</u> any waterbed heaters?	
	YES	391

	IF "YES" ON G-29, ASK: +))))))))))))))))))))))))))))))))))))				
	* * * *	ONE TWO THREE OR MORE		. 2	392
	•	w many of these waterbed heaters are <u>used</u> all year long?			
	* * * * *	NONEONETWOTHREE OR MORE		. 1 . 2	393
01	THER AF	PPLIANCES			
G-32.		rn to Exhibit G-32. Please tell me which of the appliances on the Exhibit artment? (CIRCLE ALL THAT APPLY.)	are <u>u</u>	<u>sed</u> in your	
	a.	HEATED AQUARIUM (20 GALLONS OR LARGER)	<u>YES</u> . 1	<u>NO</u> 0	394
	b.	ELECTRIC DEHUMIDIFIER	. 1	0	395
	C.	ELECTRIC HUMIDIFIER	. 1	0	396
	d.	ELECTRIC PUMP FOR WELL WATER	. 1	0	397
	e.	EXHAUST FAN (INCLUDE BATHROOM, KITCHEN OR BASEMENT EXHAUST FANS)	. 1	0	398
	f.	AIR CLEANER (PORTABLE FLOOR OR FURNACE MODEL)	. 1	0	399
	g.	EVAPORATIVE COOLER (SWAMP COOLER)	. 1	0	400
	h.	PERSONAL COMPUTER	. 1	0	401
	i. L	ASER PRINTER FOR COMPUTER (NOT DOT MATRIX)	. 1	0	402
	j. F	ACSIMILE MACHINE (FAX)	. 1	0	403
	k.	PHOTOCOPIER (SEPARATE FROM FACSIMILE MACHINE)	. 1	0	404

POOLS AND HOT TUBS

INTERVIEWER: CHECK A-1 "HOUSING STRUCTURE" ON FOLDOUT PAGE. IF SINGLE FAMILY OR MOBILE HOME, ASK THE FOLLOWING QUESTIONS; OTHERWISE, SKIP TO H-1 ON PAGE 38.

))))))))))))))))))))))))))))))))))))))	
*		
*	YES	405
*	NO 0> [G-36]	
IF "VEC" ON (
IF "YES" ON (
)))))))))))))))))))))))))))))))))	
*G-34. Is it a	nealed pools	
*	YES, HEATED	406
*	NO	400
	[0 00]	
IF "YES"	ON G-34, ASK:	
)))))))))))))))))))))))))))	
	lease turn to the "Blue Card" and tell me what fuel is used most often to heat the pool	
	ater? (IF MORE THAN ONE FUEL USED, CHECK FUEL USED MOST OFTEN.)	
*		
*	ELECTRICITY 05	
*	NATURAL GAS (UNDERGROUND PIPES) 01	
*	BOTTLED GAS (LPG OR PROPANE GAS) 02	
*	FUEL OIL	
*	KEROSENE OR COAL OIL	407-08
*	COAL OR COKE 06	
*	WOOD	
*	SOLAR	
*	OTHER (SPECIFY): 21	
*	DON'T KNOW 96	

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR "FUEL USED" IF NOT ALREADY CIRCLED.

ALSO, IF NATURAL GAS, "FOR OTHER APPLIANCES" CIRCLE "1" FOR "YES" UNDER "USAGE" COLUMN.

G-36. Does	s your home have a heated hot tub, spa, or jacuzzi, other than a bathtub?	
	YES	<i>409</i> -1]
INTERVIE	WER: IF AFTER EACH USE, THE WATER DRAINS OUT, CIRCLE "NO" FOR G-36 AND SKIF	P TO H-1.
+))))	ES" ON G-36, ASK: O)))))))))))))))))))))))))))))))))))	
* * * *	ELECTRICITY	
* * *	KEROSENE OR COAL OIL	410-11

INTERVIEWER: CHECK FOLDOUT PAGE. CIRCLE "1" FOR "FUEL USED" IF NOT ALREADY CIRCLED.

ALSO, IF NATURAL GAS, "FOR OTHER APPLIANCES" CIRCLE "1" FOR "YES" UNDER "USAGE" COLUMN.

 SOLAR
 08

 OTHER (SPECIFY):
 21

 DON'T KNOW
 96

Section H. CONSERVATION MEASURES AND USAGE

INSULATION

H-1. Overall, would you say that this home/apartment is well insulated, adequately insulated, or poorly insulated? Insulation includes window caulking or weather stripping.

WELL INSULATED 1	
ADEQUATELY INSULATED	
POORLY INSULATED	412
NO INSULATION (VOLUNTEERED) 4	
DON'T KNOW	

INTERVIEWER: CHECK A-1 "HOUSING STRUCTURE" ON THE FOLDOUT PAGE. IF SINGLE-FAMILY HOME OR MOBILE HOME, ASK H-2, OTHERWISE SKIP TO H-3.

H-2. Does your home have any of the following insulation?

	YES	NO	DON'T KNOW	
a. Roof or Ceiling Insulation	1	0	6	413
b. Insulation in Outside Walls	1	0	6	414
c. Insulation (Blanket) Around the Hot Water Heater	1	0	6	415
d. Insulation Around Hot Water Pipes	1	0	6	416
e. Insulation Around Heating and/or Cooling Ducts	1	0	6	417
f. Weather Stripping Around Any Windows or Doors to the Outside	1	0	6	418
g. Caulking	1	0	6	419

INTERVIEWER: ASK EVERYONE

H-3. Does your home have any of the following?

	YES	NO	DON'T KNOW	
a. Automatic Set-back or Clock Thermostat	1	0	6	4 20
b. Regular Maintenance of Heating System/ Furnace	1	0	6	421
c. Large Tree(s) That Shade Your House or Apartment from the Afternoon Summer Sun	1	0	6	422

NEW TECHNOLOGIES

H-4. Please turn to Exhibit H-4. There are new products designed to save energy. They are just becoming available and most people may not have heard about them yet. Have you heard of any of the following:

	H-4. Have Heard		H-5.	Used In	Home	
NEW PRODUCTS	YES	NO	YES	NO	DK	
a. Low-E Window Glass a.	1	0	1	0	6	<i>4</i> 23-24
b. Instantaneous (or Point-of-Use) Water Heaterb.	1	0	1	0	6	<i>4</i> 25-26
c. Ground-Source Heat Pump	1	0	1	0	6	427-28
d. Water-Source Heat Pump d.	1	0	1	0	6	429-30
e. Thermal Storage e.	1	0	1	0	6	431-32
f. Heat Pump Water Heater f.	1	0	1	0	6	433-34
g. "Combo Heater" Gas-Fired Water Heater with Heat Exchanger for Space Heatingg.	1	0	1	0	6	435-36
h. Halogen Light Bulbs h.	1	0	1	0	6	437-38
i. Compact Fluorescent Light Bulbs i.	1	0	1	0	6	439-40

FOR EACH "YES" ON H-4, ASK, OTHERWISE --> [H-6]
+)))))))))))))))))))))))))))))))))))

*
*H-5. Does your household use (NEW PRODUCT) in your home?
)))))))))

WINDOWS/DOORS

H-6.	How many sliding glass doors does your household have that go from a heated area to the outside or unheated area?	to an
	NUMBER OF SLIDING GLASS DOORS:	441
	INTERVIEWER: COUNT EACH PAIR OF SLIDING GLASS DOORS AS ONE DOOR.	
	+)))))))))))))))))))))))))))))))))))))	
	*H-7. Please turn to Exhibit H-7. Which describes the glass in your sliding door? *	
	* SINGLE PANE GLASS	
	* DOUBLE PANE GLASS	442
	* TRIPLE PANE GLASS 4	772
	* TRIPLE PANE GLASS WITH LOW-E COATING	
	* DON'T KNOW	
MA	TERVIEWER: IF ASKED, LOW-E COATING IS A TRANSPARENT, MICROSCOPIC LAYER OF METALLIC ATERIAL APPLIED AT THE FACTORY TO THE INSIDE OF A DOUBLE- OR TRIPLE- PANE GLASS TO DUCE HEAT TRANSFER.	
H-8	Please turn to Exhibit H-8. How many windows does your home have? Each window that opens separ	ately
11 0.	should be counted as one window. Include basement, attic, garage, and porch windows only if these a are heated.	
	NUMBER OF WINDOWS	43-44
Te.		
IN ⁻	TERVIEWER: IF ASKED, DOUBLE HUNG SLIDER WINDOWS COUNT AS ONE WINDOW. EACH WINDOW	W
TH	AT OPENS SEPARATELY SHOULD BE COUNTED AS ONE WINDOW. ALSO COUNT WINDOWS THAT	

H-9.	Please turn windows.	to Exhibit H-9. Which best describes most of the windows in your home? Do not cons	ider storm
		SINGLE-PANE GLASS 1 DOUBLE-PANE GLASS 2 DOUBLE-PANE GLASS WITH LOW-E COATING 3 TRIPLE-PANE GLASS WITH LOW-E COATING 5 DON'T KNOW 6	445
M	ATERIAL APF	: IF ASKED, LOW-E COATING IS A TRANSPARENT, MICROSCOPIC LAYER OF METALL PLIED AT THE FACTORY TO THE INSIDE OF A DOUBLE- OR TRIPLE- PANE GLASS TO T TRANSFER	.IC
H-10). Do you ha	ave storm windows or plastic coverings on most of your windows?	
		YES, STORM WINDOWS	446 447 448
IN	TERVIEWER	READ: "Please do not consider storm windows in answering the following questions."	
H-11	I. Exhibit H-	9 shows the location of the window frame. Is most of the window glass held in place by	a metal o r nonmeta l frame? (If storm windows a r e present, answer f o r regular windows , not the storm windows .)
		METAL (ALUMINUM OR STEEL) 1 NONMETAL (WOOD OR VINYL) 2 OTHER 3 DON'T KNOW 6	449

H-12. How many of the original windows have been replaced, all, some, or none of the windows? (Exclude additions onto the house.)

ALL OF THE WINDOWS	[H-14]
SOME OF THE WINDOWS 2	450
NONE OF THE WINDOWS	[H-15]
DON'T KNOW	[H-15]

IF "SO	ME" ON H-12, ASK:	
+)))))))))))))))))))))))))))))))))))	
	Please turn to Exhibit H-13. Which best describes most of the replacement windows?	
*	CIRCLE ONE ONLY.	
*		
*	SINGLE-PANE GLASS 1	
*	DOUBLE-PANE GLASS 2	
*	DOUBLE-PANE GLASS WITH LOW-E COATING	451
*	TRIPLE-PANE GLASS	
*	TRIPLE-PANE GLASS WITH LOW-E COATING 5	
*	DON'T KNOW 6	
H-14. Please	e turn to the "Yellow Card". Approximately how long ago were the windows replaced?	
	LESS THAN 2 YEARS 1	
	2 - 4 YEARS	
	5 - 9 YEARS	452
	10 - 19 YEARS	
	20 YEARS OR MORE	
	DON'T KNOW	

COOLING FANS

H-15. Which fans did your household use to assist in cooling your home last summer?

H-15. Which lans did your nousehold use to assist in cooling your nome last su	mme	17			
TYPES OF HOUSEHOLD FANS	YES	NO	NOT HERE LAST SUMMER	DON'T KNOW	
a. Window Fan	1	0	5	6	<i>4</i> 53
b. Portable Table or Floor Fan	1	0	5	6	454
c. Attic Exhaust Fan	1	0	5	6	455
d. "Whole House" Cooling Fan (usually in attic or entrance to attic)	1	0	5	6	456
e. Ceiling Fan	1	0	5	6	457
IF USE CEILING FAN ON H-15, ASK: +))))))))))))))))))))))))))))))))))))					<i>4</i> 58
HOME ACTIVITIES					
H-17. On a typical weekday in this home, is there:	YES	N	DON'T WONX C		

INTERVIEWER: "Lot of Energy" DOES NOT MEAN HUMAN ENERGY, SUCH AS HOUSEWORK

a. Operation of a home-based service or business? 1

If "YES" (SPECIFY): _____ 1

b. Some other activity requiring <u>a lot</u> of energy?

459

460

461

Section I. DEMAND-SIDE MANAGEMENT

INTERVIEWER READ: "This next Section applies only to your experiences living in this home/apartment."

I-1.	Please turn to Exhibit I-1. Are any of these programs offered by your electric utility, natural gas utility, or throu	ugh
	some other group?	J
	YES	465
I-2.	Has your household participated in any of these programs for this home during the last 12 months?	
	YES	466
	ITERVIEWER: CHECK FOLDOUT PAGE. IF HOUSEHOLD USES NATURAL GAS, ASK I-3, OTHERWISE KIP TO I-4.	
I-3.	Were these electric or natural gas programs? (CIRCLE ALL THAT APPLY.)	
	NATURAL GAS PROGRAM	467 468 469
	ITERVIEWER: IF THE RESPONDENT HAS QUESTIONS CONCERNING DEFINITIONS FOR THE OLLOWING QUESTIONS, REFER TO EXHIBIT I-1.	
I-4.	Has your household had a home energy audit within the past 12 months?	
	YES 1	470

I-5.	Has your household participated in a load control program within the past 12 months whe your electric utility to shut off some equipment in your home during the weekday in return utility bill?		
	YES NO	0> [I-7]	471
	IF "YES" ON I-5, ASK: +))))))))))))))))))))))))))))))))))))	e or	
	* YES	NO	
	* AIR-CONDITIONER	0	472
	* WATER HEATER	0	473
	* OTHER APPLIANCE/EQUIPMENT	0	474
	* DON'T KNOW	0	475
I-7.	Has your household participated in an energy conservation program in the last 12 months some equipment or service, such as a water heater blanket, low flow showerhead, or fur YES	rnace maintenance	
	NO DON'T KNOW		476
	IF "YES" ON I-7, ASK: +))))))))))))))))))))))))))))))))))))	household?	
	* YES	<u>NO</u>	
	* COMPACT FLUORESCENT LIGHT BULBS	0	477
	* LOW-FLOW SHOWERHEAD	0	478
	* WATER HEATER BLANKET	0	479
	* INSULATION	0	480
	* CAULKING/WEATHER STRIPPING	0	481
	* ENERGY-CONSERVING WINDOWS	0	482
	* MAINTENANCEHEATING SYSTEM, ETC	0	483
	* OTHER ITEM (SPECIFY):	0	484
	* DON'T KNOW	0	485

I-9.	Did your household receive, within the last 12 months, a low interest loan, rebate or other financial incentive to encourage you to buy energy-efficient equipment?		
	YES	495	
	IF "YES" ON I-9, ASK: +))))))))))))))))))))))))))))))))))))		
	* YES NO		
	* AIR CONDITIONING EQUIPMENT	496	
	* WATER HEATER	497	
	* HEATING EQUIPMENT	498	
	* REFRIGERATOR	499	
	* COMPACT FLUORESCENT LIGHT BULBS	500	
	* OTHER (SPECIFY):	501	
	* DON'T KNOW	502	
	*		
	*I-11. How important was the utility's financial assistance in making the decision to purchase the * energy efficient equipment? Was it very important, somewhat important, or would you * have bought it anyway? * VERY IMPORTANT	503	
I-12.	Has your household participated in a program within the last 12 months that encouraged you to switch fuels for certain equipment in your home?		
	YES	504	
I-13.	Has your household participated in a time-of-use rate program within the last 12 months, where you receive cheaper electric rates if you use electricity at certain times of the day when demand is lowest?		
	YES 1 NO 0 DON'T KNOW 6	505	

Section J. FUEL USED

BOX 4

INTERVIEWER: USE THE FOLDOUT PAGE TO CHECK AND UPDATE THE ANSWERS TO THE FOLLOWING QUESTIONS.

INTERVIEWER READ: "To be sure that I have the correct information about which fuels are used for certain purposes, I need to double check the following."

J-1. I have circled that your household uses (READ EACH FUEL CIRCLED "YES" UNDER "FUEL USED" ON THE FOLDOUT PAGE.) Is that correct?

INTERVIEWER: CHECK [] IF NO CHANGES, OTHERWISE INDICATE CHANGES ON FOLDOUT.

J-2. During 1993, did your household use (READ EACH FUEL NOT CIRCLED "YES" UNDER "FUEL USED" ON THE FOLDOUT PAGE. CIRCLE EACH "YES" OR "NO.")



J-3. Now, let's talk about electricity. I have circled that electricity is used for (READ EACH USE CIRCLED "YES UNDER "USAGE" ON THE FOLDOUT PAGE.) Is that correct?

INTERVIEWER: CHECK [] IF NO CHANGES, OTHERWISE INDICATE CHANGES ON FOLDOUT.

J-4. During 1993, did your household use electricity for (READ EACH FUEL NOT CIRCLED "YES" UNDER "USAGE" ON THE FOLDOUT PAGE. CIRCLE EACH "YES" OR "NO.")

FOR EACH USAGE OF ELECTRICITY, ASK:

- +))))))))))))))))))))))))))))))))
- *J-5. Did your household pay for the electricity used for (USE), or was it included in the rent or
- condo fee, or was it paid some other way? (CIRCLE THE ANSWER UNDER "HOW USAGE
- * IS PAID" FOR EACH "YES" CIRCLED UNDER "USAGE.")

NATURAL GAS

BOX 5

INTERVIEWER: CHECK FOLDOUT PAGE. IF NATURAL GAS USED, CONTINUE, OTHERWISE CHECK HERE [] AND SKIP TO BOX 6, (BOTTLED GAS) PAGE 50.

J-6. Now let's talk about natural gas. I have circled that natural gas is used for (READ EACH USE CIRCLED "YES" UNDER "USAGE" ON THE FOLDOUT PAGE.) Is that correct?

INTERVIEWER: CHECK [] IF NO CHANGES, OTHERWISE INDICATE CHANGES ON FOLDOUT.

J-7. During 1993, did your household use natural gas for (READ EACH USAGE NOT CIRCLED "YES" UNDR "USAGE" ON THE FOLDOUT PAGE. CIRCLE EACH "YES" OR "NO".)

FOR EACH USAGE OF NATURAL GAS, ASK:

- +)))))))))))))))))))))))))))))))
- *J-8. Did your household pay for the natural gas used for (USE), or was it included in the rent
- * or condo fee, or was it paid some other way? (CIRCLE THE ANSWER UNDER "HOW
- * USAGE IS PAID" FOR EACH "YES" CIRCLED UNDER "USAGE.")
- J-9. Does your household combine with others in your building or development (Home Owners Association) to buy or contract for natural gas from someone other than the local gas utility and then have the local utility deliver the gas? Gas bought this way is often called "gas transportedfor the account of others," "transported gas," "spot market gas," or "direct purchase gas."

	YES 1 NO 0> [BOX 6] DON'T KNOW 6> [BOX 6]	517
	DON 1 KNOW	
IF "YES"	ON J-9, ASK:	
))))))))))))))))))))))))))))))	
	an you give me the name of the company or broker or another contact person that can	
	ve me more information about direct purchase gas?	
*		
*	Contact Person:	
*		
*	Telephone Number: ()	
*		
*	Company Name:	518
*		
*	Address:	
*		
*	City/State/ZIP:	
*	-	
*	Unable to provide more information	

BOTTLED GAS (LPG OR PROPANE)

BOX 6	
INTERVIEWER: CHECK FOLDOUT PAGE, IF "BOTTLED GAS" USED, CONTINUE, OTHERWISE CHECK HE [] SKIP TO BOX 7 (FUEL OIL), PAGE 51.	RE
J-11. Is your bottled gas paid for by your household, included in your rent or condo fee, or is it paid by some other means?	
PAID BY HOUSEHOLD	520
INTERVIEWER: CIRCLE THE ANSWER UNDER "HOW USAGE IS PAID" FOR BOTTLED GAS ON FOLDOUT PAGE.	-
J-12. Is bottled gas delivered to your home? YES 1 NO 0> [BOX 7] DON'T KNOW 6> [BOX 7]	521
INTERVIEWER: MARK UNDER "FUEL DELIVERED" ON FOLDOUT PAGE. IF "YES" ON J-12, ASK: +))))))))))))))))))))))))))))))))))))	522
*J-14. About how many deliveries did your household get in the past 12 months? * * * * * * * * * * * * *	23-24

FUEL OIL

$R \cap Y$	7

INTERVIEWER: CHECK FOLDOUT PAGE, IF FUEL OIL USED, CONTINUE, OTHERWISE CHECK HERE [] AND SKIP TO BOX 8 (KEROSENE SECTION), PAGE 53.

AND SKII TO	BOX 0 (RENOSENE SECTION), I AGE 33.	
J-15. Is your fue way?	PAID BY HOUSEHOLD	526
INTERVIEWER	2: CIRCLE THE ANSWER UNDER "HOW USAGE IS PAID" FOR FUEL OIL ON FOLDOUT PAG	ŝΕ.
just approx a. b. c.	99 GALLONS OR LESS	527
J-17. Is fuel oil o	VES 1 NO 0> [BOX 8] DON'T KNOW 6> [BOX 8: PAGE 53]	528
	INTERVIEWER: MARK UNDER "FUEL DELIVERED" ON FOLDOUT PAGE.	

+))))))))))))))))))))))))))))))))))))	
	How many different companies delivered fuel oil to your household since January 1, 1993?	
* * * * * *	ONE 1 TWO 2 THREE OR MORE 3 DON'T KNOW 6	529
	About how many deliveries did your household get in the past 12 months?	
*	NUMBER OF DELIVERIES	530-31

KEROSENE

I	BOX 8	

INTERVIEWER: CHECK FOLDOUT PAGE. IF KEROSENE IS USED, CONTINUE, OTHERWISE, CHECK HERE
[] AND SKIP TO J-28, PAGE 55.

J-20.	Is kerosene delivered to your (home/apartment)?	
	YES	533
	INTERVIEWER: MARK UNDER "FUEL DELIVERED" ON FOLDOUT PAGE.	
	IF "YES" ON J-20, ASK: +))))))))))))))))))))))))))))))))))))	
	* ONE	534
	* *L 22. About how many deliveries did your household get in the past 12 months?	
	*J-22. About how many deliveries did your household get in the past 12 months?	
	* NUMBER OF DELIVERIES	35-36

3. Did you	ur household buy kerosene in the past 12 months and bring it home, that is, cash and carry?	
	YES	53
+))))) *J-24.	ON J-23, ASK: ON J-23, ASK: How many times in the past 12 months did your household buy kerosene and bring thome?	
* * * * *	NUMBER OF TIMES	538-3
	Please turn to Exhibit J-25. These are common sizes for kerosene containers. On average how much kerosene did your household buy and bring home each time?	
* * * * * * *	1 GALLON 1 3 GALLONS 2 5 GALLONS 3 55 GALLONS 4 OTHER (SPECIFY): 5 NOT SURE 6	54
* * *J-26. /	About how much per gallon did your household pay for kerosene, on the average?	
*	PRICE	541-4
+)) *J-2 *	"NOT SURE" ON J-26, ASK: (1))))))))))))))))))))))))))))))))))))	
* *	PRICE \$ IN TOTAL	544-4



INTERVIEWER: ASK EVERYONE.

J-28. Please turn to Exhibit J-28. We may have covered this before. Have any wood logs or other wood such as wood scraps or pellets been burned in the past 12 months? (CIRCLE ALL THAT APPLY.) 549 550 551 552 PAGE 57] J-29. Please turn to Exhibit J-29. Where were the wood, scraps, pellets or other material burned? (CIRCLE ALL THAT APPLY.) 553 554 FIREPLACE WITHOUT INSERT 3 --> [J-31] 555 FURNACE 4 --> [J-31] 556 PELLET STOVE 5 --> [BOX 9: 557 PAGE 571 IF "HEATING STOVE" OR "FIREPLACE INSERT" ON J-29, ASK: +)))))))))))))))))))))))))))))))) *J-30. Does the (heating stove/fireplace insert) have EPA certification? 558 IF "YES, WOOD LOGS" OR "YES, WOOD SCRAPS" ON J-28, ASK; OTHERWISE --> [BOX 9] +)))))))))))))))))))))))))))))) *J-31. Please turn to Exhibit J-31. Using the pictures, about how much wood has your household burned in the past 12 months? ABOUT 1/2 CORD 3 --> [J-33] 559 MORE THAN 1/2 BUT LESS THAN ONE FULL CORD 4 --> [J-33]

+))))))))	NUMBER OF CORDS BURNED:	ords were	560-61
	OBE FOR RESPONDENT'S BEST ESTIMATE OF NUMBER OF CORDS TO NEAREST CORD, OR CORD PLUS FRACTION, (FOR EXAMPLE:		12,
YES	shold purchase any firewood for your home in the past 12 months?		562
bought the <u>last</u> LES 1/4 ABC MOI FUL	ain at Exhibit J-34. Which category best describes how much wood you be time you bought wood? STHAN 1/4 CORD	1 2 3	563
a. \$10 b. \$11 c. \$26 d. \$51 e. \$76 f. \$10 g. DON	OR LESS	02> [BOX 9] 03> [BOX 9] 4> [BOX 9] 05> [BOX 9] 06> [BOX 9]	564-65
	PRICE PER CORD\$.00	566-68

Section K: FUEL BILLS

BOX 9

INTERVIEWER: CHECK THE FOLDOUT PAGE. IF THE HOUSEHOLD PAYS FOR TYPE OF ENERGY, COMPLETE THIS SECTION. IF ALL FUELS ARE INCLUDED IN RENT, FEES OR OTHER, CHECK HERE [] AND SKIP TO BOX 16, PAGE 71.

ELECTRICITY BILL

INTERVIEWER: CHECK FOLDOUT PAGE, IF ELECTRICITY BILL IS PAID BY THE HOUSEHOLD, CONTINUE. OTHERWISE CHECK HERE [] AND SKIP TO BOX 10, PAGE 59.

K-1.	What is the name, address, telephone number and account number for	your household's electricity supplier
	SUPPLIER NAME:	
	STREET ADDRESS:	
	CITY:	58
	STATE: ZIP:	
	TELEPHONE:	
	ACCOUNT NUMBER:	58

INTERVIEWER: IT IS VERY IMPORTANT TO OBTAIN THE ACCOUNT NUMBERS FROM THE RESPONDENT. PLEASE ENCOURAGE THEM TO LOOK UP THE NUMBERS, IF POSSIBLE.

K-2.	Does your	electricity bill come addressed to you or is it in another name?	
		SAME NAME 1> [BOX 10] ANOTHER NAME 2	583
K-3.	What is the	e billing name and address?	
		BILLING NAME:	
		STREET ADDRESS:	584
		CITY:	
		STATE: ZIP:	
K-4.	Please turr	n to the "Beige Card". Just for our records, what is the relationship of this person to you?	
	b. c. d. e. f. g. h.	CHILD OR GRANDCHILD	85-86

NATURAL GAS BILL

BOX	10	١

INTERVIEWER: CHECK FOLDOUT PAGE, IF NATURAL GAS BILL IS PAID BY THE HOUSEHOLD, CONTINUE. OTHERWISE CHECK HERE [] AND SKIP TO BOX 11, ON PAGE 61.

K-5. What is the	name, address, telephone number an	d account number for	your household's natural gas sup	plier?
	SUPPLIER NAME:		-	
	STREET ADDRESS:			
	CITY:			588
	STATE:	_ ZIP:		
	TELEPHONE:			
	ACCOUNT NUMBER:		_	589
INTERVIEWER PLEASE ENC	: IT IS VERY IMPORTANT TO OBTAIN DURAGE THEM TO LOOK UP THE NU	THE ACCOUNT NUN MBERS, IF POSSIBLI	MBERS FROM THE RESPONDENT	Γ.
K-6. Does your	natural gas bill come addressed to you	u or is it in another naı	me?	
	SAME NAME			590
K-7. What is the	e billing name and address?			
	BILLING NAME:			
	STREET ADDRESS:		<u>.</u>	591
	CITY:			
	STATE:	_ ZIP:		

K-8. Please turn to the "Beige Card". Just for our records, what is the relationship of this person to you?

a.	SPOUSE	
b.	PARTNER	
C.	PARENT OR GRANDPARENT 03	
d.	SIBLING 04	
e.	CHILD OR GRANDCHILD	592-93
f.	OTHER RELATED INDIVIDUAL	
g.	ROOMMATE 07	
ň.	OTHER UNRELATED INDIVIDUAL OR COMPANY	
i. R	EFUSED	

BOTTLED GAS (LPG) BILL

BOX	1	1
BU JX	- 1	

INTERVIEWER: CHECK FOLDOUT PAGE, IF BOTTLED GAS BILL IS PAID BY THE HOUSEHOLD, AND BOTTLED GAS IS DELIVERED TO HOUSEHOLD CONTINUE, OTHERWISE CHECK HERE [] AND SKIP TO BOX 12, ON PAGE 63.

K-9. What is the	name, address, telephone number and	I account number for	your household's bottled gas supp	olier?
	SUPPLIER NAME:		-	
	STREET ADDRESS:		-	
	CITY:			595
	STATE:	ZIP:		
	TELEPHONE:			
	ACCOUNT NUMBER:		_	596
	:: IT IS VERY IMPORTANT TO OBTAIN DURAGE THEM TO LOOK UP THE NU			
K-10. Does you	r bottled gas bill come addressed to yo	ou or is it in another na	ame?	
	SAME NAME			597
K-11. What is th	e billing name and address?			
	BILLING NAME:		-	
	STREET ADDRESS:		_	598
	CITY:			
	STATE:			

K-12. Please turn to "Beige Card". Just for our records, what is the relationship of this person to you?

a.	SPOUSE	
b.	PARTNER	
C.	PARENT OR GRANDPARENT 03	
d.	SIBLING	
e.	CHILD OR GRANDCHILD	599-600
f.	OTHER RELATED INDIVIDUAL	
g.	ROOMMATE 07	
ň.	OTHER UNRELATED INDIVIDUAL OR COMPANY	
i. R	EFUSED	

INTERVIEWER: RECORD ADDITIONAL SUPPLIERS ON PAGE 67.

FUEL OIL BILL

BOX 12

INTERVIEWER: CHECK FOLDOUT PAGE, IF THE FUEL OIL BILL IS PAID BY THE HOUSEHOLD AND FUEL OIL IS DELIVERED TO THE HOUSEHOLD CONTINUE, OTHERWISE, CHECK HERE [] AND SKIP TO BOX 13, PAGE 65.

K-13. What is supplie	s the name, address, telephone n er?	number and account number f	or your household's fuel oil	
	SUPPLIER NAME:		-	
	STREET ADDRESS:		-	
	CITY:			602
	STATE:	ZIP:		
	TELEPHONE:			
	ACCOUNT NUMBER:		_	603
	/ER: IT IS VERY IMPORTANT TO NCOURAGE THEM TO LOOK UP			IT.
K-14. Does	your fuel oil bill come addressed to	o you or is it in another name?)	
	a. SAME NAMEb. ANOTHER NAME			604
K-15. What is	s the billing name and address?			
	BILLING NAME:		-	
	STREET ADDRESS:		=	605
	CITY:			
	STATE:			

K-16. Please tu	urn to the "Beige Card". Just for our records, what is the relationship of this	s person to	you?
a. b. c. d. e. f. g. h. i.	SPOUSE PARTNER PARENT OR GRANDPARENT SIBLING CHILD OR GRANDCHILD OTHER RELATED INDIVIDUAL ROOMMATE OTHER UNRELATED INDIVIDUAL OR COMPANY REFUSED	02 03 04 05 06 07	606-07

INTERVIEWER: RECORD ADDITIONAL SUPPLIERS ON PAGE 67.

KEROSENE BILL

3

INTERVIEWER: CHECK FOLDOUT PAGE, IF THE KEROSENE IS DELIVERED TO THE HOUSEHOLD CONTINUE, OTHERWISE CHECK HERE [] AND SKIP TO BOX 14, PAGE 68.

	/hat is thupplier?	e name, address, telephone number and account numbe	r for your household's kerosene	
		SUPPLIER NAME:	_	
		STREET ADDRESS:	_	
		CITY:	-	609
		STATE:ZIP:	_	
		TELEPHONE:	_	
		ACCOUNT NUMBER:		610
INTER PLEAS	VIEWER SE ENCO	: IT IS VERY IMPORTANT TO OBTAIN THE ACCOUNT NU DURAGE THEM TO LOOK UP THE NUMBERS, IF POSSIB	JMBERS FROM THE RESPONDEN' LE.	Γ.
K-18. D	oes you	kerosene bill come addressed to you or is it in another na	ame?	
	a. b.	SAME NAME		611
K-20. W	/hat is th	e billing name and address?		
		BILLING NAME:	_	
		STREET ADDRESS:	_	612
		CITY:	-	
		STATE: ZIP:	_	

K-21. Please turn to the "Beige Card". Just for our records, what is the relationship of this person to you?

a.	SPOUSE 0	1
	PARTNER	
C.	PARENT OR GRANDPARENT 0	3
d.	SIBLING	4
e.	CHILD OR GRANDCHILD	613-14
f.	OTHER RELATED INDIVIDUAL	6
	ROOMMATE 0	
ĥ.	OTHER UNRELATED INDIVIDUAL OR COMPANY 0	8
i. R	EFUSED 0	9

INTERVIEWER: RECORD ADDITIONAL SUPPLIERS ON PAGE 67.

INTERVIEWER: USE THIS PAGE TO RECORD ADDITIONAL BOTTLED GAS/FUEL OIL/KEROSENE SUPPLIERS

ADDITIONAL SUPPLIERS

FUEL:					
	[]	BOTTLED G FUEL OIL KEROSENE	CITY: STATE:	SUPPLIER NAME: STREET ADDRESS: ONE: NT NUMBER:	15
		NOTES:			
FUEL:					
	[]	BOTTLED G FUEL OIL KEROSENE	CITY: STATE:_ TELEPH	SUPPLIER NAME: STREET ADDRESS: ONE: NT NUMBER:	16
		NOTES:			
FUEL:					
	[]	BOTTLED G FUEL OIL KEROSENE	CITY:	SUPPLIER NAME: STREET ADDRESS: ONE: NT NUMBER:	17
		NOTES:			

AUTHORIZATION FORM

BOX 14

INTERVIEWER: COMPLETE THE AUTHORIZATION FORM NOW FOR ANY FUELS PAID FOR BY THE HOUSEHOLD (SEE FOLDOUT PAGE). USE THE YELLOW PAGE INSERTED IN THE QUESTIONNAIRE.

ON THE AUTHORIZATION FORM:

- STEP 1: ENTER THE NAME OF EACH COMPANY THAT SUPPLIED FUEL TO THE HOUSEHOLD IN THE APPROPRIATE BOX. THIS INFORMATION WAS OBTAINED ON THE PREVIOUS PAGES.
- STEP 2: EITHER YOU OR THE RESPONDENT ENTER THE RESPONDENT'S NAME, ADDRESS, AND TELEPHONE NUMBER.
- STEP 3: HAVE THE RESPONDENT SIGN THE AUTHORIZATION FORM.

READ TO RESPONDENT:

The Department of Energy is interested in how much energy households use and pay for and household participation in energy programs. With your permission on this form, your supplier of electricity, natural gas, bottled gas, fuel oil or kerosene will provide your household information to Response Analysis Corporation, whosi conducting this survey for the Department of Energy.

All your information is kept confidential and will be combined with information from other households across the United States to indicate national and regional trends.

K-22. Will you please enter your name, address, and sign this Authorization Form.

AUTHORIZATION FORM SIGNED	618
AUTHORIZATION FORM NOT SIGNED	

NONHOUSEHOLD USES

DOV	4	_
BOX	-1	b

INTERVIEWER: CHECK FOLDOUT PAGE. IF USE OF ANY FUEL IS PAID BY HOUSEHOLD, ASK. OTHERWISE, GO TO BOX 16, PAGE 71.

K-23.	. Please turn to the "Pink Card". Look at the top. Do any of your household fuel bills in 1993 include fuel used for any of the purposes listed on the card?					
	YES	619				
	F "YES" ON K-23, ASK:					
	·)))))))))))))))))))))))))))))))))))))					
	K-24. For which of the purposes listed at the top of the card are costs of fuel included in your					
	household fuel bills? (CIRCLE ALL THAT APPLY.)					
	FARM BUILDINGS OR MACHINERY	32 <i>0</i>				
		32 1				
		322				
	SOME USE OTHER THAN FOR YOUR OWN					
	HOUSEHOLD (SPECIFY):	623				
	K-25. Which fuel bills include costs of fuel used for purposes other than your own living quarters?					
	(CIRCLE ALL THAT APPLY.)					
	NATURAL GAS (FROM UNDERGROUND PIPES)	624				
	BOTTLED GAS (LPG OR PROPANE)	32 <i>5</i>				
		62 <i>6</i>				
	KEROSENE OR COAL OIL 4	627				
	E FLECTDICITY 5	ຂາເ				

INTERVIEWER: ASK THE FOLLOWING QUESTIONS FOREACH FUEL CIRCLED IN K-25.

IF "NATURA	AL GAS (FROM UNDERGROUND PIPES)" ON K-25, ASK:	
+)))))))))))))))))))))))))))))))))))	
*K-26. Plea	se refer again to the "Pink Card." What portion of the natural gas bill is	
	onhousehold uses in 1993?	
*		
*	VERY LITTLE (1-4%)	
*	SOME (5-33%)	
*	ABOUT HALF (34-66%)	629
*	ABOUT 3/4 (67-95%)	020
*	MOST ALL OF IT (96-99%)	
IF "BOTTLE	D GAS" ON K-25, ASK:	
))))))))))))))))))))))	
	se refer again to the "Pink Card". What portion of the bottled gas bill is	
	onhousehold uses in 1993?	
*	Simouseriola ases in 1770.	
*	VERY LITTLE (1-4%)	
*	SOME (5-33%)	
*	ABOUT HALF (34-66%)	630
*	ABOUT 3/4 (67-95%)	000
*	MOST ALL OF IT (96-99%)	
IF "FUEL OI	L" ON K-25, ASK:	
))))))))))))))))))))Q	
	se refer again to the "Pink Card". What portion of the fuel oil bill is for nonhousehold	
	in 1993?	
*		
*	VERY LITTLE (1-4%)	
*	SOME (5-33%)	
*	ABOUT HALF (34-66%)	631
*	ABOUT 3/4 (67-95%)	
*	MOST ALL OF IT (96-99%)	
IF "KEROSE	INE OR COAL OIL" ON K-25, ASK:	
))))))))))))))))))))))))))	
	se refer again to the "Pink Card". What portion of the kerosene bill is for	
	iousehold uses in 1993?	
*		
*	VERY LITTLE (1-4%)	
*	SOME (5-33%)	
*	ABOUT HALF (34-66%)	632
*	ABOUT 3/4 (67-95%)	032
*	MOST ALL OF IT (96-99%)	
	WOST ALL OF IT (70-7770) 4	

+))))))) *K-30. Pl	TRICITY" ON K-25, ASK: ()))))))))))))))))))))))))))))))))))	633
BOX 16 INTERVIEWEI SKIP TO BOX	R: ASK K-31 ONLY IF DATA NOT AVAILABLE FROM AUTHORIZATION FORM. OTHERWISE	
	riew verification purposes, may I have your name, phone number, and mailing address My supervisor may want to call you to see if I really have talked to you.	
	RESPONDENT'S NAME:	
	STREET ADDRESS:	
	CITY OR TOWN/STATE/ZIP CODE:	
	TELEPHONE NUMBER: AREA CODE: ()	
BOX 17		_
	R: CHECK FOLDOUT PAGE, IF "CONDOMINIUM" OR "RENT" OR "OCCUPIED WITHOUT FRENT", ASK K-32, OTHERWISE SKIP TO L-1.	
I have the	be needing some additional information about fuels used in this building (house). May name of the person or company to whom you pay rent or who is responsible for paying ills for this building (house)?	
	NAME:	
	STREET ADDRESS:	634
	CITY OR TOWN/STATE/ZIP CODE:	
	TELEPHONE NUMBER: AREA CODE: ()	

+))))	IN AN APARTMENT OR MOBILE HOME COMPLEX ASK, OTHERWISE,> L-1. ())))))))))))))))))))))))))))))) toos this (building/development/complex/park) have a name?	
*	YES	635
*	NO 0> [L-1]	
*		
*K-34. *	/hat is the name?	
*	NAME:	

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION L: BACKGROUND INFORMATION

INTERVIEWER: ASK EVERYONE

L-1. Now I have some questions about the people who live here. Pleasetell me their <u>relationship</u> to (HOUSEHOLDER) and their ages on their last birthday. First, I need to get this information for (HOUSEHOLDER).

COMPLETE INFORMATION IN COLUMN A THROUGH C FOR HOUSEHOLDER FIRST. THEN ASK FOR EACH REMAINING PERSON. RECORDRELATIONSHIP, NOT NAMES

INTERVIEWER: PERSONS WHO ARE NORMALLY MEMBERS OF THE HOUSEHOLD, BUT WHO ARE NOW LIVING AWAY FROM HOME (e.g., college students or members of the armed forces) SHOULD NOT BE LISTED

	CHECK DOX	L-1. COLUMN A	COLUI	MN B	COLUMN C	L-3. COLUMN D			
	CHECK BOX IN THIS COLUMN TO	RELATIONSHIP	EMPLOYMENT STATUS (AGE 14+)						
PERSON	IDENTIFY	TO			AGE	FULL	PART	NOT	
NUMBER	RESPONDENT	HOUSEHOLDER	FEMALE	MALE	AGE	TIME	TIME	EMPLOYED	
1	[]	Householder	1	2		1	2	0	646-52
2	[]		1	2		1	2	0	653-59
3	[]		1	2		1	2	0	660-66
4	[]		1	2		1	2	0	667-73
5	[]		1	2		1	2	0	674-80
6	[]		1	2		1	2	0	681-87
7	[]		1	2		1	2	0	688-94
8	[]		1	2		1	2	0	695-701
9	[]		1	2		1	2	0	702-08
10	[]		1	2		1	2	0	709-15
11	[]		1	2		1	2	0	716-22
12	[]		1	2		1	2	0	723-29

730-31

L-2.	I have liste	d (READ RELATIONSHIPS FROM L-1 IN GRID). Have I missed:	
	[QUESTIO	NS ANSWERED "YES" ADD TO LISTING] YES	NO
	a.	Any babies or small children?	0
	b.	Any lodgers, boarders, or persons in your employment who live there?	0
	C.	Anyone who usually lives here but is away traveling or in the hospital?	0
	d.	Anyone else staying here who does not have a regular residence elsewhere?	0
	TERVIEWER DLDOUT PA	: MARK NUMBER OF HOUSEHOLD MEMBERS UNDER "HOUSEHOLD M GE.	EMBERS" ON
	INTERVIE	WER: FOR EACH PERSON 14 YEARS OR OLDER ON L-1 COLUMN C, AS	SK L-3.
L-3.		e) now employed full-time, that is 30 hours or more per week, employed (RECORD UNDER L-3 COLUMN D ON GRID)	oyed part-time, or nt
L-4.	How many	people in this household drive a car on a fairly regular basis that is, at lea	est once a month?
		NUMBER OF REGULAR DRIVERS: NONE DON'T KNOW	

L-5.	For background statistical purposes,I have a few questions about the (householder). Please look at What is the highest grade or year (HOUSEHOLDER) completed in school or college?	Exhibit L-5
	GRADE SCHOOL/HIGH SCHOOL KINDERGARTEN TO 4TH GRADE	
	COLLEGE: 1 YEAR 13 2 YEARS 14 3 YEARS 15 4 YEARS 16 5 YEARS 17 6 OR MORE YEARS OF COLLEGE 18	734-35
	NEVER ATTENDED SCHOOL 00 DON'T KNOW 96	
L-6.	Please look at Exhibit L-6. Which best describes (HOUSEHOLDER)?	
	NOW MARRIED1WIDOWED2DIVORCED OR SEPARATED3NEVER MARRIED4UNMARRIED LIVING WITH PARTNER5	736
L-7.	Is (HOUSEHOLDER) of Spanish or Hispanic origin or descent?	
	YES	737
L-8.	Please turn to Exhibit L-8. Which of the groups on the exhibit best describes (HOUSEHOLDER)?	
	WHITE 1 BLACK 2 AMERICAN INDIAN, ALASKAN NATIVE 3 ASIAN, PACIFIC ISLANDER 4 OTHER (SPECIFY): 5	738



L-9. Please turn to Exhibit L-9. In the past 12 months, did you or any member of you**family** living here receive any income or benefits from these sources? When we say "family," we mean all related persons living in the household.

(INTERVIEWER: READ AND MARK "YES" OR "NO" FOR EACH ITEM.)

	YES	<u>NO</u>	
a.	Wages and salaries	0	739
b.	Self-employed from a business or farm	0	740
C.	Social Security or Railroad Retirement	0	741
d.	Pensions and other retirement funds	0	742
e.	Food Stamps	0	743
f.	Aid to Families with Dependent Children (AFDC)	0	744
g.	Unemployment Compensation	0	745
h.	Supplemental Security Income (SSI)	0	746
i. C	General assistance or other public assistance	0	747

L-10. Now please look at the next Exhibit L-10. This is a list of income groups. Please tell me which group letter <u>best</u> describes the total combined income in the past 12 months of all members of your **family** living here, from all sources -- wages, interest, alimony, Social Security, and so forth -- before taxes and deductions.

CIRCLE NUMBER FOR INCOME GROUP

A.	LESS THAN \$3,000	01 <),		Ο.	\$22,500 - \$24,999	15	<),		
B.	\$3,000 - \$3,999	02	*		Р.	\$25,000 - \$27,499	16	*	CHECK	
C.	\$4,000 - \$4,999	03	*		Q.	\$27,500 - \$29,999	17	*	BOX 18	
D.	\$5,000 - \$5,999	04	*		R.	\$30,000 - \$32,499	18	*>	NEXT	
E.	\$6,000 - \$7,499	05	*		S.	\$32,500 - \$34,999	19	*	PAGE	
F.	\$7,500 - \$8,999	06	*	SKIP	Τ.	\$35,000 - \$39,999	20	*		
G.	\$9,000 - \$9,999	07	*>	TO	U.	\$40,000 - \$44,999	21	<)-		748-
Н.	\$10,000 - \$10,999	80	*	BOX 19						
l.	\$11,000 - \$12,499	09	*	PAGE 80	٧.	\$45,000 - \$49,999	22	<),	SKIP	
J.	\$12,500 - \$13,999	10	*		W.	\$50,000 - \$74,999	23	*>	TO	
K.	\$14,000 - \$14,999	11	*		Χ.	\$75,000 - \$99,999	24	*	N-1 ON	
L.	\$15,000 - \$17,499	12	*		Υ.	\$100,000 OR MORE .	25	<)-	PAGE 83	
M.	\$17,500 - \$19,999	13	*							
N.	\$20,000 - \$22,499	14 <) -			DON'T KNOW	96	<),		
						REFUSED	97	*>	[L-11]	
								<)-		

BOX 18

INTERVIEWER: CHECK INCOME FROM L-10 WITH NUMBER OF HOUSEHOLD MEMBERS ON FOLDOUT PAGE. IF IT MATCHES BELOW, GO TO [N-1] ON PAGE 83. OTHERWISE, GO TO BOX 19 ON THE NEXT PAGE.

If Income Group	Number of Household Members is	then
O	1	go to [N-1]
Р	1 or 2	go to [N-1]
Q	1 or 2	go to [N-1]
R	1, 2, or 3	go to [N-1]
S	1, 2, or 3	go to [N-1]
T		go to [N-1]
U	1, 2, 3, 4, or 5	go to [N-1]

Section M: PROGRAM PARTICIPATION

BOX	19

INTERVIEWER: THESE QUESTIONS REFER TO ANY HOME THE RESPONDENT OCCUPIED IN THE LAST YEAR

YE	AK.						
<u></u> M-1.	Please t	urn	to Exhibit M-1. This shows some examples of how a person ca	n we	atheri	ze a hom	e, for example
	improve the last y	the year	heating system, insulate walls, insulate the hot water leater, weather from October 1992 to September 1993 did you receive any his fweatherizing your home?	r strip	or ca	aulk, and	so on. During
			YES			0	761
M-2.	energy of local gov supplier	cost verr :. If	are of an energy assistance program that helps people pay for their s? Some names used for the program are HEAP, LIHEAP, and Hament. The assistance can be paid directly to the household or to the heat is included in a household's rent, the payment can be used is energy assistance program?	lEAT. ne ele	It is ectric	run by St or gas co	ate, county, or mel
			YES				762
M-3.			to Exhibit M-3. During the last year from October 1992, through hold receive government assistance for any of the following:	n Sep	temb		- did anyone ir
		a.	Help in paying home heating costs?	<u>YES</u> . 1	<u>NO</u> 0	DON'T KNOW 6	763
		b.	Help in paying home <u>cooling</u> or air-conditioning costs?	. 1	0	6	764
		C.	Help with other home energy costs?	. 1	0	6	765
		d.	Emergency supplies, such as blankets, portable heaters, or temporary emergency shelter due to loss of				
	ſſ		home heat?	. 1	0	6	766 1
			TED HELLER IE ALL HALOH OD HOOMIT HALOLAH IALAA O OHID TO A				411

INTERVIEWER: IF ALL "NO" OR "DON'T KNOW" IN M-3, SKIP TO M-7.

IF "YES" IN M-3, ASK M-4., OTHERWISE --> [M-7]
+)))))))))))))))))))))))))))
*M-4. Please describe this help.
*
*
*
*

IF "YES" IN M-3a, (HEATING ASSISTANCE), ASK:				
+)))))))))))))))))))))))))))))))))))))	usehold an	t haln	in	
* paying for home heating costs. How were these paymen	0		""	
* (READ EACH AND CIRCLE "YES" OR "NO")			DON'T	
*	<u>YES</u>	NO	KNOW	
* a. Check to household	1	0	6	767
* * b. Sent directly to utility company or				
* fuel dealer	1	0	6	768
*		ŭ	· ·	, 60
* c. Coupon/voucher to household	1	0	6	769
*	4	•	,	
* d. Two-party check to household	1	0	6	770
* e. Other (SPECIFY):	1	0	6	771
*		ŭ	· ·	
*				
*M-6. About how much money for your heating assistance didy	you or your	utility	or fuel	
* supplier receive from October 1992 to September 1993?				
* AMOUNT RECEIVED	\$		00	772-75
* NOT SURE				70

Septe	ember	199	3. Was th	nere ever		ing that p	eriod wl	nen you	wanted to " OR "NO"	use yo	our mair	October 1992d In source of hea TEM.)
	a.				vas <u>broken</u> pair or repl						0	776
	b.				kerosene, able to pay					1	0	777
	C.				scontinued vere <u>unable</u>					1	0	778
		INT	ERVIEWE	R: IF AL	L ITEMS M	ARKED "I	NO," SK	IP TO N-	1.			
					(: OTHER	WISE>	[N-1].					
			about the)))Q that you w	ent witho	ut heat-	-how ma	n <u>yseparat</u>	e time:	s were th	nere?
* *		-	TOTAL TI	MES:						L		779-80
	Altog 1993		er, how m	any hour	s or days v	vere you v	vithout I	neat from	o October	1992 1	to Septe	mber
* *		I	HOURS:			OR			DA	AYS:		781-83
* *M-1(*). Du	ring	which mo	onth or mo	onths were	you with	out heat	? (CHE	CK ALL TH	HAT AF	PPLY.)	
*		01 (ОСТОВЕ	R ('92)		784-85		08	MAY (93)		798-99
*			NOVEMB			786-87		09	JUNE			800-01
*			DECEMB			788-89		10	JULY (802-03
*			JANUARY			790-91		11	AUGU	ST ('93		804-05
*			FEBRUAF			792-93		12	SEPTE			806-07
*			MARCH (794-95							
*		07 /	APRIL ('93	3)	796-97		96	NOT	SURE			808-09
*												
*	1	rin ~ 1	hood the	00 140*5	- د ماطم بیمیر	hootyee	r hom -	in com-	othor	n		
* V -1	ı. Du	ııng 1	mese time	es, were	you able to	neat you	i nome	iii some	otner way	! (
*		,	VEC								1	040
*												810
			NO								U	

Section N: VEHICLES

N-1. Do you or other members of your household own or have the regular use of any cars, trucks, vans, or similar vehicles? (DO NOT INCLUDE MOTORCYCLES OR MOPEDS. SEE INSTRUCTIONS ON NEXT PAGE.)
YES
INTERVIEWER: "REGULAR USE" MEANS THE VEHICLE IS KEPT AT HOMEAND IS AVAILABLE FOR <u>SOME</u> PERSONAL USE.
+)))))))))))))))))))))))))))))))))))))
* NUMBER OF VEHICLES:
N-2. IF HOUSEHOLD HAS MORE THAN EIGHT VEHICLES, MARK ANSWERS FOR THE EIGHT VEHICLES USED MOST. USE VEHICLE SUPPLEMENT FORM FOR VEHICLES 5-8.
INTERVIEWER READ TO RESPONDENT: "I'd like you to describe each vehicle your household owns or uses. First, let's start with the vehicle you use most often."
ASK SERIES OF QUESTIONS FOR EACH VEHICLE.
SPECIAL INSTRUCTIONS:
N-4. MODEL NAME: A MODEL NAME MAY CONSIST OF SEVERAL PARTS BE SURE TO GET THE COMPLETE MODEL NAME. HERE ARE SOME EXAMPLES, WHERE THE COMPLETE MODEL NAME IS IN PARENTHESES: FORD (GALAXY), CHEVROLET (V10 SUBURBAN, GMC (V15 JIMMY), TOYOTA (2WD CARGO VAN). IF RESPONDENT DOES NOT KNOW THE MODEL NAME OF A TRUCK, PROBE FOR SIZE (1/2 TON, 3/4 TON, ETC.)
N-30. EXPLAIN WHAT THE VIN IS IF RESPONDENT DOES NOT KNOW. IF RESPONDENT QUESTIONS NEED FOR VIN, SAY: "The VIN is a set of codes assigned to a vehicle at the factory that, when decoded, describes several of the vehicle's characteristics. These characteristics may then be used to calculate an estimated miles per gallon for that specific type of vehicle."
SHOW EXHIBIT N-30 OF POSSIBLE VIN LOCATIONS. ATTEMPT TO SECURE VIN FROM ONE OF THESE DOCUMENT SOURCES. RECORD THE VIN AND VERIFY FOR CORRECTNESS.
IF VEHICLE AVAILABLERECORD VIN FROM VEHICLE ITSELF.

VEHICLES PAGE

QUESTION	I
N-3. What is the make?	MAKE
N-4. What is the model name? (SEE INSTRUCTIONS)	MODEL
N-5. What is the model year?	YEAR
N-6. Please turn to Exhibit N-6. What is the type of vehicle? (CIRCLE <u>ONE</u>). WRITE ADDITIONAL IDENTIFYING INFORMATION IN MARGIN.	CAR
N-7. Does it have an air conditioner?	YES
N-8. Does it have an automatic transmission or manual shift?	AUTOMATIC TRANSMISSION 1 MANUAL SHIFT
N-9. How many cylinders does the engine have?	3-CYLINDERS 03 4-CYLINDERS 04 5-CYLINDERS 05 6-CYLINDERS 06 8-CYLINDERS 08 OTHER 21 DON'T KNOW 96

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-3.	MAKE	MAKE	MAKE	MAKE
	916-17	992-93	1067-68	1153-54
N-4.	MODEL	MODEL	MODEL	MODEL
	918-19	994-95	1069-70	1155-56
N-5.	19	19	19	19
	920-21	996-97	1071-72	1157-58
N-6.	STATN WAGON 02 LARGE VAN 03 MINI VAN 04 PICK UP TRUCK 05	CAR	STATN WAGON 02 LARGE VAN 03 MINI VAN 04 PICK UP TRUCK 05	LARGE VAN 03 MINI VAN 04 PICK UP TRUCK 05
	922-23	998-99	1073-74	1159-60
N-7.	YES	YES		
	924	1000	1075	1161
N-8.	MANUAL 2	AUTOMATIC	MANUAL 2 DON'T KNOW 6	MANUAL 2 DON'T KNOW 6
N-9.	3 CYLINDERS 03 4 CYLINDERS 04 5 CYLINDERS 05 6 CYLINDERS 06 8 CYLINDERS 08 OTHER 21	3 CYLINDERS 03 4 CYLINDERS 04 5 CYLINDERS 05 6 CYLINDERS 06 8 CYLINDERS 08	3 CYLINDERS	4 CYLINDERS 04 5 CYLINDERS 05 6 CYLINDERS 06 8 CYLINDERS 08 OTHER 21

QUESTION	
N-10. Does it have front-wheel, rear-wheel, or 4-wheel drive? (IF RESPONDENT SAYS COMBINATION THAT INCLUDES 4-WHEEL DRIVE, MARK 4-WHEEL DRIVE.)	FRONT-WHEEL 1 REAR-WHEEL 2 4-WHEEL 3 OTHER: (Specify) 5 DON'T KNOW 6
N-11. Does the fuel system use a carburetor, fuel injection, or is it a diesel engine or an electric vehicle?	CARBURETOR 1 FUEL INJECTION 2 DIESEL 3) > [N-13] ELECTRIC 4) > [N-14] OTHER: (Specify) 5 DON'T KNOW 6
N-12. Please turn to Exhibit N-12. During the past year, what type of fuel did this vehicle use?	UNLEADED GASOLINE Regular (87-88.9 Octane) 01 Mid-grade (89-90.9 Octane) 02 Premium (91 or Greater Octane) 03 LEADED GASOLINE 04 ETHANOL BLEND (Gasohol) 05 NATURAL GAS 06 PROPANE 07 ALCOHOL 08 OTHER: (Specify) 21 DON'T KNOW 96
N-13. When fuel was purchased for this vehicle during the past year, was most of the fuel purchased at full-service pumps or self-service pumps? (IF "MINI-SERVICE," RECORD AS SELF-SERVICE.)	FULL-SERVICE
N-14. Did you get this vehicle within the past 12 months or did you get it before that? (CIRCLE ONE, THEN ASK APPROPRIATE FOLLOW-UP QUESTION)	WITHIN PAST 12 MONTHS

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-10.	REAR WHEEL 2 4 WHEEL 3 5	FRONT WHEEL 1 REAR WHEEL 2 4 WHEEL	REAR WHEEL 2 4 WHEEL 3 5	REAR WHEEL 2 4 WHEEL 5
	928	1004	1079	1165
N-11.	FUEL INJECTION 2 DIESEL) > [N-13] 3 ELECTRIC) > [N-14] 4 5 DON'T KNOW 6	CARBURETOR	FUEL INJECTION 2 DIESEL) > [N-13] 3 ELECTRIC) > [N-14] 4 5 DON'T KNOW 6	FUEL INJECTION 2 DIESEL) > [N-13] 3 ELECTRIC) > [N-14] 4 5 DON'T KNOW 6
	929			
N-12.	UNLEADED GAS Reg. (87-88.9 oct). 01 Mid. (89-90.9 oct). 02 Prem. (91 + oct) 03	Mid. (89-90.9 oct) 02	` ,	Mid. (89-90.9 oct) 02
	ETHANOL BND 05 NATURAL GAS 06 PROPANE 07 ALCOHOL 08	LEADED GAS	ETHANOL BND 05 NATURAL GAS 06 PROPANE 07 ALCOHOL 08	ETHANOL BND 05 NATURAL GAS 06 PROPANE 07 ALCOHOL 08
	DON'T KNOW 96	DON'T KNOW 96		DON'T KNOW 96
	930-31	1006-07		
N-13.	SELF SERVICE	DON'T KNOW 6	SELF SERVICE	SELF SERVICE 2 BOTH 5
	932	1008	1083	1169
N-14.	WITHIN 12 MNTHS 1 BEFORE) > [N-17] 2	WITHIN 12 MNTHS 1 BEFORE) > [N-17] 2		WITHIN 12 MNTHS 1 BEFORE) > [N-17] 2
	933	1009	1084	1170

QUESTION	
IF "WITHIN PAST 12 MONTHS," ASK: +))))))))))))))))))))))	MONTH
*N-15. In what month and year did you get * it?	YEAR
* *N-16. Approximately how many miles has it * been driven since you obtained it?	MILES
IF "BEFORE THAT," ASK: +))))))))))))))))))))))))))))))) *N-17. Approximately how many miles has it * been driven in the past 12 months?	MILES PAST 12 MOS
N-18. What is your best estimate of the average miles per gallon (MPG) for this vehicle?	MPG6
N-19. Please look at Exhibit N-19. What is the basis for your estimate of miles per gallon?	FUEL PURCHASE LOG1COMPUTER2ADVERTISED3ROUGH ESTIMATE4DON'T KNOW6
N-20. What is the sex of the household member who usually drives this vehicle?	FEMALE
N-21. What is the approximate age of the household member who usually drives this vehicle?	AGE

N-16. MILES MAPG DK) > [N-20] 1		VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-16. MILES MILES MILES MILES MILES	N-15.	MONTH	MONTH	MONTH	MONTH
MILES					
N-17. MILES MILES MILES MILES MILES 943-47 1019-23 1094-98 1 N-18. MPG MPG DK) > [N-20] 96 D	N-16.		-		->[N-18]
N-18. MPG	N-17.	MILES	MILES	MILES	MILES
N-19. LOG	N-18.	MPG DK) > [N-20] 96	MPG DK) > [N-20] 96	MPG DK) > [N-20]96	MPG DK) > [N-20] 96
N-20. FEMALE 1 FEMALE 1 FEMALE 1 FEMALE 1 MALE 2 MALE 2 DON'T KNOW 6 DON'T KNOW 7 1102 N-21. AGE AGE AGE	N-19.	LOG	LOG	LOG	LOG
N-21. AGE AGE AGE AGE	N-20.	FEMALE	FEMALE	FEMALE	FEMALE
	N-21.	DON'T KNOW 96	DON'T KNOW 96	AGE DON'T KNOW 96	AGE DON'T KNOW 96

QUESTION	
N-22. Please look at Exhibit N-22. Where is this vehicle usually parked at home?	GARAGE 1 CARPORT 2 DRIVEWAY 3 STREET 4 PARKING LOT 5 PARKING GARAGE 6 IT VARIES 7 OTHER: (Specify) 8
N-23. Other than commuting, is this vehicle used for business purposes?	YES
IF USED FOR BUSINESS PURPOSES, ASK: +))))))))))))))))))))))))))))))))))))	PERCENT
* *N-25. Is this vehicle owned or leased by your * employer? * *	YES
* IF "YES" ON N-25, ASK: * +)))))))))))))))))))))) * *N-26. Please look at Exhibit N-26. * * How would you best describe * * the organization or business * * that owns or leases this vehicle? *	POLICE/FIRE 1 OTHER GOVERNMENT 2 TAXI 3 UTILITY COMPANY 4 SALES 5 AUTO DEALER 6 OTHER BUSINESS 7
* *N-27. Is this vehicle refueled at a central site? * * * *	YES

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-22.	CARPORT	STREET	CARPORT 2 DRIVEWAY 3 STREET 4 PARKING LOT 5 PARKING GARAGE 6 VARIES 7 8	CARPORT 2 DRIVEWAY 3 STREET 4 PARKING LOT 5 PARKING GARAGE 6 VARIES 7 8
N-23.	YES	YES	YES	YES
N-24.				DON'T KNOW 96
	956-57	1032-33	1107-08	1193-94
N-25.	NO) > [N-28]0		NO) > [N-28] 0	YES
	958			
N-26.	OTHER GOVN 2 TAXI		OTHER GOVN 2 TAXI	OTHER GOVN
	959	1035	1110	1196
N-27.		YES	YES	NO0
		DON'T KNOW 6	DON'T KNOW 6	DON'T KNOW 6

QUESTION	
N-28. Is the vehicle here now? (CIRCLE ANSWER, READ APPROPRIATE FOLLOW-UP QUESTION.)	YES VEHICLE HERE
IF "YES," READ: I would like to get the Vehicle Identification Number and odometer rethe end of the interview. Do you know what a Vehicle Identification IVIN BY SHOWING EXHIBIT N-30. THEN, ASK QUESTIONS N-3 TH	Number or VIN is? (IF DON'T KNOW, EXPLAI
N-29. ODOMETER READING RECORD FROM OBSERVATION OR ASK IF "NO" ON N-28.: Approximately what is the odometer reading for this vehicle? RECORD WHETHER ACTUAL OR ESTIMATE.	ODOMETER
N-30. VEHICLE IDENTIFICATION NUMBER I would like to get the Vehicle Identification Number or VIN Number for this vehicle. Do you know what the VIN Number is? (IF DON'T KNOW, EXPLAIN VIN BY SHOWING EXHIBIT N-30.) RECORD FROM OBSERVATION OR ASK IF "NO" ON N-28: Do you have any records that may contain the VIN Number such as an insurance card, registration, title, or bill of sale?	VIN FROM OBSERVATION

INTERVIEWER: ASK N-3 THRU N-30 FOR NEXT VEHICLE.

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-28.		HERE 1 NO) > [N-29] 0		
	961	1037	1112	1198
	962-67			
	902-07	1038-43	1113-18	1199-1204
N-29.	(Circle One) ACTUAL1	(Circle One)	(Circle One)	(Circle One)
	ESTIMATE2	ESTIMATE 2	ACTUAL	ESTIMATE 2
		1044	1119	1205
N-30.	RECORDS 5 REFUSED 7	OBSERVATION 4 RECORDS 5 REFUSED 7 NOT OBTAINED 8 GET VIN #, WRITE IN NEXT PAGE * * * * * * * * * * * * * * * * * * *	RECORDS 5 REFUSED 7	RECORDS 5 REFUSED 7 NOT OBTAINED 8 GET VIN #, WRITE IN NEXT PAGE * * * *

Form EIA-457A (1993)

<u>VIN #1:</u>	
970	986
<u>VIN #2</u>	
1046	1062
<u>VIN #3</u>	
1121	1137
<u>VIN #4</u>	
1207	1223

NEW HOME SUPPLEMENT

BOX 20	
INTERVIEWER: CHECK FOLDOUT PAGE. ASK THIS SECTION IF SINGLE-FAMILY HOME, OWNED (NOT RENTED), AND BUILT IN 1988 OR LATER. OTHERWISE GO TO THE LIGHTING SUPPLEMENT, IF HOUSEHOLD HAS BEEN SELECTED FOR THE LIGHTING SUPPLEMENT. (SEE THE HOUSING UNIT RECORD SHEET.)	
INTERVIEWER READ: "Since this is a (relatively) new house, I have a few questions about this house."	
NH-1. Do you know which side of your home faces the South?	
YES	1234
If "YES" on NH-1, ASK: +))))))))))))))))))))))))))))))))))))	
* MORE GLASS AREA	1235
INTERVIEWER READ: "Here are some questions that relate to the technical characteristics of your house." might remember some of these items from the materials you received when you bought the house."	You
NH-3. What is your best estimate of the R-value of the insulation in the roof or ceiling, or perhaps you know the inches of insulation? (R-VALUES RANGE FROM 4 TO 49.)	
R-VALUE OR INCHES> [NH-5] DON'T KNOW 9996 12	236-39

IF "DON'T KNOW" ON NH-3, ASK: +))))))))))))))))))))))))))))))))))))	e you informed that the insulation in your roof or code for your location?	
* EXCEEDS THE BUILDING CO	S	1240
INTERVIEWER: CHECK FOLDOUT PAGE. IF CE TO NH-7.	NTRAL AIR CONDITIONING CONTINUE, OTHERWISE S	SKIP
IF HAS CENTRAL AIR-CONDITIONING, ASK +))))))))))))))))))))))))))))))))))))	s your best estimate of the size of the cooling capacity = 1 ton cooling capacity.)	1241-44
* * DON'T KNOW	9996	
*NH-6. Is your air-conditioner a high-efficiend	y unit?	
* NO		1249
NH-7. Is your heating equipment a high-efficiency	ınit?	
NO		1250
NH-8. Can you set thermostats for your main heating in sections of your home? This is usually can	ng equipment so that you have different temperatures lled "Zoned-Heating".	
		1251

NH-9.	Please don't try to find them, but we are interested in whether you maintain files or still have the
	brochures pertaining to information about the characteristics of your home and major appliances?

YES 1	
NO	1252
DON'T KNOW	

INTERVIEWER: SEE THE HOUSING UNIT RECORD SHEET. IF THE HOUSING UNIT HAS BEEN SELECTED FOR THE LIGHTING SUPPLEMENT, GO TO THE LIGHTING SUPPLEMENT, OTHERWISE CONTINUE WITH SECTION O.

Section O. HOUSING MEASUREMENTS



BOX 21

INTERVIEWER: CHECK FOLDOUT PAGE: IF SINGLE-FAMILY OR MOBILE HOME, CONTINUE. OTHERWISE, SKIP TO 0-2.

O-1. Please turn to Exhibit O-1. Which of these does your home have here? CIRCLE ALL THAT APPLY.

	<u>YES</u>	NO	
a.	NO GARAGE 1	0	1266
b.	ONE-CAR GARAGE 1	0	1267
C.	TWO-CAR GARAGE	0	1268
d.	THREE OR MORE CAR GARAGE	0	1269
e.	COVERED CARPORT 1	0	1270

BASEMENT

IF SINGLE-FAMILY HOME OR BUILDING WITH 2-4 UNITS, ASK. OTHERWISE, --> [O-5]. +)))))))))))))))))))))))))))))))) *O-2. Please turn to Exhibit O-2. Does your home have a basement, an enclosed crawl space, a crawl space open to the outside, a concrete slab, or a combination of these? 1271 1272 1273 CRAWL SPACE -- OPEN TO THE OUTSIDE 3 1274 1275

INTERVIEWER: REMEMBER TO INCLUDE BASEMENT ON DIAGRAM. DONOT INCLUDE CRAWL SPACE.

	+)))))))))))))))))))))))))))))))))))))	
	* ALL	1276
	+)))))))))))))))))))))))))))))))))))))	
	* YES, PART	1277
O-5.	LESS THAN 1 YEAR 01 1-2 YEARS 02> [O-7] 3-5 YEARS 03> [O-7] 6-10 YEARS 04> [O-7] MORE THAN 10 YEARS 05> [O-7] REST OF MY LIFE/AS LONG AS I CAN 06> [O-7] NOT SURE 96 IF "LESS THAN 1 YEAR" ON O-5, ASK:	1278-79
	+)))))))))))))))))))))))))))))))))))))	
	* YES	1000
	* ADDRESS OR CITY: * MONTH/YEAR:	1280
	* * NO 2	

MEASUREMENTS

INTERVIEWER: ALWAYS DO MEASUREMENTS FROM THE OUTSIDE WHERE POSSIBLE. IF NOT POSSIBLE, READ TO RESPONDENT: "With your home, I think it would be most appropriate to measure the inside."							
UNHEATED AREAS: WITHIN THE HOUSING UNIT THAT YOU MEASURE, INDICATE UNHEATED AREA(S) IN THE DIAGRAMS WITH SHADING. GIVE DIMENSIONS OF UNHEATED AREA(S).							
USE BLANK PAGES FACING MEASUREMENT PAGES FOR ADDITIONAL SKETCHES, MEASUREMENTS, AND EXPLANATIONS.							
RECORD ALL MEASUREMENTS ON DIAGRAMS TO NEAREST FOOT.							
DO NOT INCLUDE OPEN PORCH IN DIAGRAM							
SHADE UNHEATED AREAS THIS WAY							
O-7. To understand the usage of energy in your (house/apartment), we need to know its size in square feet. With you permission, I would like to measure your home.							
MEASUREMENTS FOLLOW 1 RESPONDENT REFUSED 7> [BOX 22: 1281 OTHER: 2 PAGE 110]							

THIS PAGE INTENTIONALLY LEFT BLANK

NOTES REGARDING BASEMENT MEASUREMENTS

FOR OFFICE USE ONLY

Flo	or Code	es		Unit A			Unit B			Unit C			Unit D		# of Units
1301	02	03	04	05-06	07-08	09	10-11	12-13	14	15-16	17-18	19	20-21	22-23	24
															·

BASEMENT MEASUREMENTS FOR HOME/APARTMENT

Single-Family Home or Townhouse []	Apartmei Unit Build		Apartment in 5+ Unit Building []	Mobile Home []
Garage type: [] No garage this floor [] Heated attached (INCLUDE) [] Unheated attached (INCLUDE/SHADE) [] Detached (DO NOT INCLUDE)	EXCLUDE		DO NOT MEASURE BASEMENT * *	MOBILE HOMES DO NOT HAVE BASEMENTS * * *
Include all enclosed space in basement Do not measure crawl space	Include only exclusive or use by house	primary .	* * *	* * * *
Floor is: [] All heated [] All unheated (SHADE) [] Partially heated (SHADE UNHEATE)	D PART)			
INTERVIEWER: REMEMBER TO SHAD WARM ENOUGH TO SIT, WORK, OR F				REA IS HEATED IF IT
Dia mana fan Ela ar with Da atau aw la	. Chana	Di	for Floor 't Other t	han Dantan milan
Diagram for Floor with Rectangular	Snape [Dia	agram for Floor if Other t	nan Rectangular
INTERVIEWER: Measurements based o	on [] Inside	[] Outside	[] Other: Specify	

NOTES REGARDING FIRST FLOOR MEASUREMENTS

FOR OFFICE USE ONLY

Flo	or Code	es		Unit A			Unit B			Unit C			Unit D		# of Units
1326	27	28	29	30-31	32-33	34	35-36	37-38	39	40-41	42-43	44	45-46	47-48	49

FIRST FLOOR MEASUREMENTS FOR HOME/APARTMENT

Single-Family Home or Townhouse []	Apartment in 2-4 Unit Building []	Apartment in 5+ Unit Building []	Mobile Home []								
Include all space enclosed from the weather											
Garage type: [] No garage [] Heated attached (INCLUDE) [] Unheated attached (INCLUDE/SHADE) [] Detached (DO NOT INCLUDE)	EXCLUDE GARAGE	EXCLUDE GARAGE	Garage type: [] No garage [] Heated attached								
Floor is: [] All heated [] All unheated - SHADE [] Part heated and part u	E unheated - SHADE UNI	HEATED PART									
	ch - INCLUDE IN DRAW Porch INCLUDE IN DR OT INCLUDE										
Diagram for Floor with Rectar	ngular Shape	Diagram for Floor if	Other than Rectangular								
[]											
INTERVIEWER: Measurements based on [] Inside [] Outside [] Other: Specify IF NO ADDITIONAL FLOORS OR ATTIC, GO TO BOX 22, PAGE 110.											

NOTES REGARDING SECOND FLOOR MEASUREMENTS

FOR OFFICE USE ONLY

Flo	Floor Codes Unit A		Unit B		Unit C		Unit D		# of Units						
1351	52	53	54	55-56	57-58	59	60-61	62-63	64	65-66	67-68	69	70-71	72-73	74

SECOND FLOOR OF HOME/APARTMENT

Single-Family Home or Townhouse []	Apartment in 2-4 Unit Building []	Apartment in 5+ Unit Building []	Mobile Home []								
Garage type: [] No garage [] Heated attached (INCLUDE) [] Unheated attached (INCLUDE/SHADE) [] Detached (DO NOT INCLUDE)	EXCLUDE GARAGE	EXCLUDE GARAGE	Garage type: [] No garage [] Heated attached								
Floor is: [] All heated [] All unheated - SHADE [] Part heated and part unheated - SHADE UNHEATED PART											
Porch type: [] No Porch [] Heated Enclosed Porch - INCLUDE IN DRAWING [] Unheated Enclosed Porch INCLUDE IN DRAWING AND SHADE [] Open Porch DO NOT INCLUDE											
·											
Diagram for Floor with F	Rectangular Shape	Diagram for Flo	oor if Other than Rectangular								
INTERVIEWER: Measurements based on [] Inside [] Outside [] Other: Specify											
IF NO ADDITIONAL FLOORS OR ATTIC, GO TO BOX 22, PAGE 110.											

THIRD FLOOR OF HOME/APARTMENT

Single-Family Home or Townhouse []	Apartment in 2-4 Unit Building []	Apartment in 5+ Unit Building []	Mobile Home []									
Include all space enclosed from the weather												
Floor is: [] All heated [] All unheated - Sl [] Part heated and	HADE part unheated - SHADE UI	NHEATED PART										
Porch type: [] No porch [] Heated Enclosed Porch - INCLUDE IN DRAWING [] Unheated Enclosed Porch INCLUDE IN DRAWING AND SHADE [] Open Porch DO NOT INCLUDE												
Diagram for Floor with Rectangular Shape Diagram for Floor if Other than Rectangular												
	[]											
INTERVIEWER: Measuremen												

FOR OFFICE USE ONLY

Flo	Floor Codes Unit A		Unit B			Unit C			Unit D			# of Units			
1376	77	78	79	80-81	82-83	84	85-86	87-88	89	90-91	92-93	94	95-96	97-98	99

ATTIC OF HOME

INTERVIEWER: IF APARTMENT IN 2-4 UNITS, ATTIC MUST BE FOR EXCLUSIVE USE OF HOUSEHOLD.

IF APARTMENT IN 5+ UNITS BUILDING, DO NOT INCLUDE

Townhouse [] Building [] Building [] Mobile Home []											
Attic ic.											
Attic is: [] Heated - DRAW [] All unheated and finished - DRAW [] Part heated and part unheated - SHADE UNHEATED PART [] Unheated and unfinished - DO NOT DRAW											
Diagram for Attic with Rectangular Shape Diagram for Floor if Other than Rectangular											
[] [] INTERVIEWER: Measurements based on [] Inside [] Outside [] Other: Specify											

FOR OFFICE USE ONLY

Floo	Floor Codes Unit A Unit B		Unit C		Unit D			# of Units							
1400	01	02	03	04-05	06-07	08	09-10	11-12	13	14-15	16-17	18	19-20	21-22	23

Form EIA-457A (1993)

BOX 22
INTERVIEWER: DID YOU REMEMBER TO INSPECT VEHICLES FOR VIN NUMBERS AND ODOMETER READINGS?
YES

This is the end of the interview. Thank you very much for your help.

TIME	ENDED):	

Section P. INTERVIEWER OBSERVATION

FILL	IN AND CHECK THAT ALL INFORMATION IS COMPLETE:	
P-1.	LENGTH OF INTERVIEW: MINUTES	1424-26
P-2.	INTERVIEWER'S SIGNATURE: DATE:	1427-30
P-3.	INTERVIEWER'S I.D.#:	1431-34
	FILL THIS OUT AFTER YOU COMPLETE THE INTERVIEW.	
P-4.	WHAT PROBLEMS, IF ANY, DID YOU HAVE IN MEASURING THIS (HOME/APART	MENT)?
P-5.	WHAT EFFECT, IF ANY, DID THESE PROBLEMS HAVE ON THE ACCURACY OF	OUR MEASUREMENTS?

P-6.	WHAT IS UNIQUE OR UNUSUAL ABOUT THIS HOUSEHOLD THAT IS RELATED TO ITS USE OF ENERGY?
P-7.	WHICH QUESTION WAS THE MOST TROUBLESOME FOR THE RESPONDENT TO UNDERSTAND ${\bf Q}$ ANSWER?
P-8.	WAS THERE A PROBLEM GETTING THE AUTHORIZATION FORM SIGNED? WHAT COULD BE DONE TO DEAL WITH THIS IN THE FUTURE?

P-9.	WHAT ELSE WOULD IT BE HELPFUL FOR US TO KNOW ABOUT THIS HOUSING UNIT OR INTERVIEW?
P-10.	DO YOU HAVE ANY SUGGESTIONS TO IMPROVE THE SURVEY FOR HOMES LIKE THIS ONE?

FOLDOUT PAGE

A-1. Housing Structure	B-3. Tenure	B-4. Condo- minium	B-7. When Home Built	B-9. Year Moved In						
Single Family Detached			Built 1988 or Later □	1993 □ 1994 □						
Single Family Attached □ Apartments 2-4 Units □		FUEL DELIVERED TO HOUSEHOLD								
		J-12. Bottled Gas .								
5+ Units Mobile Home	Payment . ⊔	J-17. Fuel Oil								
IVIODIIE HOME										
L-1. HOUSEHOLD MEMBERS										
1	🗆 4	🗆 🛮 5 🗆	6 or more	. 🗆						

FUEL USED FUEL/USAGE CATEGORIES		USAGE (Recorded During Interview)				HOW USAGE IS PAID				
YES	NO	DK		YES	NO	DK	PAID BY HH	IN RENT/ CONDO FEE	OTHER: Specify	
1			ELECTRICITY USED:							1440
			a. For home heating	1	0	6	1	2	5->	1441-42
			b. For hot water	1	0	6	1	2	5->	1443-44
			c. For cooking	1	0	6	1	2	5->	1445-46
			d. For air conditioning	1	0	6	1	2	5->	1447-48
			e. For lighting and appliances	1			1	2	5->	1449-50
1	0	6	NATURAL GAS USED:				1			1 4 51
			f. For home heating	1	0	6	1	2	5->	1452-53
			g. For hot water	1	0	6	1	2	5->	1454-55
			h. For cooking	1	0	6	1	2	5->	1456-57
			 For other appliances (clothes dryer, outdoor lights, central air conditioning) 	1	0	6	1	2	5->	1458-5
1	0	6	BOTTLED GAS (LPG OR PROPANE USED: Do not mark used if only use is for outdoor grill				1	2	5->	1460-6
1	0	6	FUEL OIL USED:				1	2	5->	1462-63
1	0	6	KEROSENE USED:							1464
1	0	6	WOOD BURNED:							1465
1	0	6	COAL USED:							1466
1	0	6	SOLAR USED:							1467

Form Approval:
OMB No.: 1905-0092
Expires: June 30,1996
*



U.S. DEPARTMENT OF ENERGY Authorization Form RESIDENTIAL ENERGY CONSUMPTION SURVEY

I hereby give permission to the company (companies) below to provide information to Response Analysis Corporation (or other designee of the U.S. Department of Energy) for confidential usein connection with their survey for the U.S. Department of Energy.

This authorization covers the following data for the period from October 1, 1992 through December 21, 1996:

- 1) the total amount of fuels used by my household
- 2) the total price charged for fuels used by my household
- 3) participation in demand-side management, energy audit, and other programs

Companies are authorized to provide this information by monthly periods or by delivery date, whichever applies. A photocopy of this authorization may be accepted with the same authority as the original.

Signature:			Date:	
PLEASE PRINT	YOUR NA	ME:		
	ADDRES	SS:		APT. NO.
	CITY OR	POST OFFICE:	STATE	ZIP CODE
	TELEPH	ONE: AREA CODE	NUMBER	
[]	this box is in	nitialed by the authorizing purposes one block below		
ELEC	TRICITY	PRINT FULL NAME	OF ELECTRIC COMPANY	
NATURAL GAS or BOTTLED GAS		PRINT FULL NAME	OF GAS COMPANY	
FUEL or KE	OIL ROSENE	PRINT FULL NAME	OF OIL COMPANY	

Form EIA-457A (1993)

	SECOND GAS COMPANY
BOTTLED GAS (LPG or Propane)	PRINT FULL NAME OF GAS COMPANY
BOTTLED GAS (LPG or Propane)	THIRD GAS COMPANY PRINT FULL NAME OF GAS COMPANY
FUEL OIL or KEROSENE	SECOND FUEL OIL/KEROSENE COMPANY PRINT FULL NAME OF OIL COMPANY
	THIRD FUEL OIL/KEROSENE COMPANY
FUEL OIL or KEROSENE	PRINT FULL NAME OF OIL COMPANY

Section N: VEHICLES

N-1. Do you or other members of your household own or have the regular use of any cars, trucks, volume similar vehicles? (DO NOT INCLUDE MOTORCYCLES OR MOPEDS. SEE INSTRUCTIONS O PAGE.)				
	YES			
	INTERVIEWER: "REGULAR USE" MEANS THE VEHICLE IS KEPT AT HOME <u>AND</u> IS AVAILABLE FOR <u>SOME</u> PERSONAL USE.			
	+)))))))))))))))))))))))))))))))))))))			
	. IF HOUSEHOLD HAS MORE THAN EIGHT VEHICLES, MARK ANSWERS FOR THE EIGHT VEHICLES ED MOST. USE VEHICLE SUPPLEMENT FORM FOR VEHICLES 5-8.			
INITI	ERVIEWER READ TO RESPONDENT: "I'd like you to describe each vehicle your household owns or uses.			
	t, let's start with the vehicle you use most often."			
ASK	SERIES OF QUESTIONS FOR EACH VEHICLE.			
SPE	CIAL INSTRUCTIONS:			
COM PAR CAR	. MODEL NAME: A MODEL NAME MAY CONSIST OF SEVERAL PARTS BE SURE TO GET THE MPLETE MODEL NAME. HERE ARE SOME EXAMPLES, WHERE THE COMPLETE MODEL NAME IS IN RENTHESES: FORD (GALAXY), CHEVROLET (V10 SUBURBAN, GMC (V15 JIMMY), TOYOTA (2WD RGO VAN). IF RESPONDENT DOES NOT KNOW THE MODEL NAME OF A TRUCK, PROBE FOR SIZE TON, 3/4 TON, ETC.)			

N-30. EXPLAIN WHAT THE VIN IS IF RESPONDENT DOES NOT KNOW. IF RESPONDENT QUESTIONS NEED FOR VIN, SAY: "The VIN is a set of codes assigned to a vehicle at the factory that, when decoded, describes several of the vehicle's characteristics. These characteristics may then be used to calculate an estimated miles per gallon for that specific type of vehicle."

SHOW EXHIBIT N-30 OF POSSIBLE VIN LOCATIONS. ATTEMPT TO SECURE VIN FROM ONE OF THESE DOCUMENT SOURCES. RECORD THE VIN AND VERIFY FOR CORRECTNESS.

IF VEHICLE AVAILABLE--RECORD VIN FROM VEHICLE ITSELF.

VEHICLES PAGE

QUEST	TION
N-3. What is the make?	MAKE
N-4. What is the model name? (SEE INSTRUCTIONS)	MODEL
N-5. What is the model year?	YEAR
N-6. Please turn to Exhibit N-6. What is the type of vehicle? (CIRCLE <u>ONE</u>). WRITE ADDITIONAL IDENTIFYING INFORMATION IN MARGIN.	CAR 01 STATION WAGON 02 LARGE VAN 03 MINI VAN 04 PICKUP TRUCK 05 SPORT-UTILITY VEHICLE 06 OTHER (SPECIFY): 21
N-7. Does it have an air conditioner?	YES
N-8. Does it have an automatic transmission or manual shift?	AUTOMATIC TRANSMISSION 1 MANUAL SHIFT 2 DON'T KNOW 6
N-9. How many cylinders does the engine have?	3-CYLINDERS 03 4-CYLINDERS 04 5-CYLINDERS 05 6-CYLINDERS 06 8-CYLINDERS 08 OTHER 21 DON'T KNOW 96

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-3.	MAKE	MAKE	MAKE	MAKE
	916-17	992-93	1067-68	1153-54
N-4.	MODEL	MODEL	MODEL	MODEL
	918-19	994-95	1069-70	1155-56
N-5.	19	19	19	19
	920-21	996-97	1071-72	1157-58
N-6.	MINI VAN 04 PICK UP TRUCK 05	STATN WAGON 02 LARGE VAN 03 MINI VAN 04 PICK UP TRUCK 05	CAR	LARGE VAN 03 MINI VAN 04 PICK UP TRUCK 05
	922-23	998-99	1073-74	1159-60
N-7.	YES	YES 1 NO 0		YES
	924	1000	1075	1161
N-8.	MANUAL 2	AUTOMATIC 1 MANUAL 2 DON'T KNOW 6	MANUAL 2	MANUAL 2 DON'T KNOW 6
N-9.	3 CYLINDERS 03 4 CYLINDERS 04 5 CYLINDERS 05 6 CYLINDERS 06 8 CYLINDERS 08 OTHER 21	3 CYLINDERS 03 4 CYLINDERS 04 5 CYLINDERS 05 6 CYLINDERS 06 8 CYLINDERS 08	3 CYLINDERS	3 CYLINDERS 03 4 CYLINDERS 04 5 CYLINDERS 05 6 CYLINDERS 06 8 CYLINDERS 08 OTHER 21

QUESTION	
N-10. Does it have front-wheel, rear-wheel, or 4-wheel drive? (IF RESPONDENT SAYS COMBINATION THAT INCLUDES 4-WHEEL DRIVE, MARK 4-WHEEL DRIVE.)	FRONT-WHEEL 1 REAR-WHEEL 2 4-WHEEL 3 OTHER: (Specify) 5 DON'T KNOW 6
N-11. Does the fuel system use a carburetor, fuel injection, or is it a diesel engine or an electric vehicle?	CARBURETOR 1 FUEL INJECTION 2 DIESEL 3) > [N-13] ELECTRIC 4) > [N-14] OTHER: (Specify) 5 DON'T KNOW 6
N-12. Please turn to Exhibit N-12. During the past year, what type of fuel did this vehicle use?	UNLEADED GASOLINE Regular (87-88.9 Octane)
N-13. When fuel was purchased for this vehicle during the past year, was most of the fuel purchased at full-service pumps or self-service pumps? (IF "MINI-SERVICE," RECORD AS SELF-SERVICE.)	FULL-SERVICE 1 SELF-SERVICE 2 BOTH EQUALLY 3 OTHER: (Specify) 5 DON'T KNOW 6
N-14. Did you get this vehicle within the past 12 months or did you get it before that? (CIRCLE ONE, THEN ASK APPROPRIATE FOLLOW-UP QUESTION)	WITHIN PAST 12 MONTHS

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-10.	REAR WHEEL 2 4 WHEEL 3	FRONT WHEEL	REAR WHEEL2 4 WHEEL3	REAR WHEEL 2 4 WHEEL 3
	928	1004	1079	1165
N-11.	FUEL INJECTION 2 DIESEL) > [N-13] 3 ELECTRIC) > [N-14] 4 5 DON'T KNOW 6	CARBURETOR	FUEL INJECTION 2 DIESEL) > [N-13] 3 ELECTRIC) > [N-14] 4 5 DON'T KNOW 6	FUEL INJECTION 2 DIESEL) > [N-13] 3 ELECTRIC) > [N-14] 4 5 DON'T KNOW 6
	929			
N-12.	Mid. (89-90.9 oct) 02		` ,	Mid. (89-90.9 oct) 02
	ETHANOL BND 05 NATURAL GAS 06 PROPANE 07 ALCOHOL 08	LEADED GAS 04 ETHANOL BND 05 NATURAL GAS 06 PROPANE 07 ALCOHOL 08 OTHER) > [N-14] 21	ETHANOL BND 05 NATURAL GAS 06 PROPANE 07 ALCOHOL 08	ETHANOL BND 05 NATURAL GAS 06 PROPANE 07 ALCOHOL 08
		DON'T KNOW 96		
N-13.	SELF SERVICE	### 1006-07 FULL SERVICE 1 SELF SERVICE 2 BOTH 3 5 DON'T KNOW 6	FULL SERVICE 1 SELF SERVICE 2 BOTH 3 5 DON'T KNOW 6	FULL SERVICE 1 SELF SERVICE 2 BOTH 3
Nai	932	1008	1083	1169
N-14.		WITHIN 12 MNTHS 1 BEFORE) > [N-17] 2		
	933	1009	1084	1170

QUESTION	
IF "WITHIN PAST 12 MONTHS," ASK: +)))))))))))))))))))))))))	MONTH
*N-15. In what month and year did you get * it?	YEAR
* *N-16. Approximately how many miles has it * been driven since you obtained it?	MILES
IF "BEFORE THAT," ASK: +))))))))))))))))))))))))))))))))))) *N-17. Approximately how many miles has it * been driven in the past 12 months?	MILES PAST 12 MOS
N-18. What is your best estimate of the average miles per gallon (MPG) for this vehicle?	MPG
N-19. Please look at Exhibit N-19. What is the basis for your estimate of miles per gallon?	FUEL PURCHASE LOG1COMPUTER2ADVERTISED3ROUGH ESTIMATE4DON'T KNOW6
N-20. What is the sex of the household member who usually drives this vehicle?	FEMALE
N-21. What is the approximate age of the household member who usually drives this vehicle?	AGE

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-15.	MONTH	MONTH	MONTH	MONTH
	YEAR 934-37	YEAR 1010-13	YEAR 1085-88	YEAR 1171-74
N-16.	MILES 938-42	MILES 1014-18	MILES 1089-93	MILES ->[N-18] 1175-79
N-17.	930-42 MILES	MILES	MILES	MILES
N-18.	MPG	MPG DK)>[N-20]96	MPG DK) > [N-20] 96	MPG DK) > [N-20] 96
N-19.	LOG	LOG	LOG	LOG
N-20.	FEMALE	FEMALE	FEMALE	FEMALE
N-21.	AGE DON'T KNOW 96	AGE DON'T KNOW 96	AGE DON'T KNOW 96	AGE DON'T KNOW 96
	952-53	1028-29	1103-04	1189-9

QUESTION	
N-22. Please look at Exhibit N-22. Where is this vehicle usually parked at home?	GARAGE 1 CARPORT 2 DRIVEWAY 3 STREET 4 PARKING LOT 5 PARKING GARAGE 6 IT VARIES 7 OTHER: (Specify) 8
N-23. Other than commuting, is this vehicle used for business purposes?	YES
IF USED FOR BUSINESS PURPOSES, ASK: +)))))))))))))))))))))))))))))))))) *N-24. What percent of total miles is for business * purposes? *	PERCENT 96
*N-25. Is this vehicle owned or leased by your * employer? *	YES
* IF "YES" ON N-25, ASK: * +)))))))))))))))) * *N-26. Please look at Exhibit N-26. * How would you best describe * the organization or business * that owns or leases this vehicle? * *	POLICE/FIRE 1 OTHER GOVERNMENT 2 TAXI 3 UTILITY COMPANY 4 SALES 5 AUTO DEALER 6 OTHER BUSINESS 7
* *N-27. Is this vehicle refueled at a central site? * * *	YES

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4
N-22.	CARPORT 2 DRIVEWAY 3 STREET 4 PARKING LOT 5 PARKING GARAGE 6 VARIES 7 8	DRIVEWAY 3 STREET 4 PARKING LOT 5 PARKING GARAGE 6 VARIES 7 8	CARPORT 2 DRIVEWAY 3 STREET 4 PARKING LOT 5 PARKING GARAGE 6 VARIES 7 8	CARPORT 2 DRIVEWAY 3 STREET 4 PARKING LOT 5 PARKING GARAGE 6 VARIES 7 8
N-23.	NO) > [N-28]0	1030 YES	YES	YES
N-24.				DON'T KNOW 96
N-25.	NO) > [N-28]0 DK) > [N-28]6	YES	YES	YES
N-26.	OTHER GOVN 2 TAXI	POLICE/FIRE 1 OTHER GOVN 2 TAXI 3 UTIL COMPANY 4	OTHER GOVN	POLICE/FIRE
N-27.	NO0	1035 YES	YES	YES

QUESTION	
N-28. Is the vehicle here now? (CIRCLE ANSWER, READ APPROPRIATE FOLLOW-UP QUESTION.)	YES VEHICLE HERE
IF "YES," READ: I would like to get the Vehicle Identification Number and odometer rethe end of the interview. Do you know what a Vehicle Identification IN BY SHOWING EXHIBIT N-30. THEN, ASK QUESTIONS N-3 TH	Number or VIN is? (IF DON'T KNOW, EXPLAIN
N-29. ODOMETER READING RECORD FROM OBSERVATION OR ASK IF "NO" ON N-28.: Approximately what is the odometer	ODOMETER
reading for this vehicle? RECORD WHETHER ACTUAL OR ESTIMATE.	Actual Reading
N-30. VEHICLE IDENTIFICATION NUMBER I would like to get the Vehicle Identification Number or VIN Number for this vehicle. Do you know what the VIN Number is? (IF DON'T KNOW, EXPLAIN VIN BY SHOWING EXHIBIT N-30.) RECORD FROM OBSERVATION OR ASK IF "NO" ON N-28: Do you have any records that may contain the VIN Number such as an insurance card, registration, title, or bill of sale?	VIN FROM OBSERVATION

INTERVIEWER: ASK N-3 THRU N-30 FOR NEXT VEHICLE.

	VEHICLE #1	VEHICLE #2	VEHICLE #3	VEHICLE #4		
N-28.		HERE 1 NO)>[N-29] 0				
	961	1037	1112	1198		
N-29.	962-67	1038-43	1113-18	1199-1204		
IV-29.		ESTIMATE 2	(Circle One) ACTUAL	ESTIMATE 2 DON'T KNOW 6		
N-30.	RECORDS 5 REFUSED 7	OBSERVATION 4 RECORDS 5 REFUSED 7 NOT OBTAINED 8 GET VIN #, WRITE IN NEXT PAGE * * * * 1045	RECORDS 5 REFUSED 7	RECORDS 5 REFUSED 7 NOT OBTAINED 8 GET VIN #, WRITE IN NEXT PAGE * * * * *		

<u>VIN #1:</u>	
970	986
<u>VIN #2</u>	
1046	1062
<u>VIN #3</u>	
1121	1137
<u>VIN #4</u>	
1207	