

# Annex A: Methodology and Data Tables

## **METHODOLOGY**

This CARAVAN survey was conducted by Big Village<sup>1</sup> among a sample of 4,032 adults 18 years of age and older. The online omnibus study is conducted three times a week among a demographically representative U.S. sample of 1,000 adults 18 years of age and older. This survey was live on July 29 - August 10, 2022.

Completed interviews are weighted by five variables: age, sex, geographic region, race and education to ensure reliable and accurate representation of the total U.S. population, 18 years of age and older. The raw data are weighted by a custom designed program which automatically develops a weighting factor for each respondent. Each respondent is assigned a single weight derived from the relationship between the actual proportion of the population based on U.S. Census data with its specific combination of age, sex, geographic characteristics, race and education and the proportion in the sample. Income was not a component of each respondent's final weight.

Respondents for this survey were selected from among those who have volunteered to participate in online surveys and polls. The data have been weighted to reflect the demographic composition of the 18+ population. All sample surveys and polls may be subject to multiple sources of error, including, but not limited to sampling error, coverage error, error associated with nonresponse, error associated with question wording and response options, and post-survey weighting and adjustments.

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<sup>1</sup> Big Village is a collaborative and consultative research partner to hundreds of organizations around the globe. They possess a wide variety of resources, tools and technologies to collect and analyze information for our clients. As a member of the Insights Association and ESOMAR (the European Society for Opinion and Marketing Research), Big Village adheres to industry ethics and best practices, including maintaining the anonymity of our respondents. Their authorization is required for any publication of the research findings or their implications.

## DATA TABLES

### Context

- In all tables, the base is adults (age 18+) in the United States.
- In the first row of each table, “Unweighted Base” refers to the unweighted number of respondents in each column.
- Percentages reported are weighted to match U.S. Census parameters based on a single weight developed by Big Village.
- A zero denotes the cell value is greater than zero, but less than 0.50.
- Demographic definitions:
  - **Low-Income** refers to respondents that reported a household income of less than US \$50,000 per year.
  - **Middle- and High-Income** refers to respondents that report a household income of greater than or equal to US \$50,000 per year.
  - **White** refers to respondents that reported their race as White and did not identify as Hispanic.
  - **Black/African American** refers to respondents that reported their race as Black/African American and did not identify as Hispanic.
  - **Hispanic** refers to all respondents that identified their ethnicity as Hispanic and race as any race other than White.
  - **Asian** refers to all respondents that identified as Asian.

### Detailed Data Tables by Question

**AA2.** The government requires new major appliances like refrigerators, clothes washers and dryers, central air conditioners, and water heaters to meet minimum energy efficiency standards, that is, to use no more than a certain amount of energy. In principle, to what extent do you support or oppose the idea that the government should set and update minimum energy efficiency standards for appliances? [Select one answer]

	All US Adults	Low-Income	Middle- and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	4032	1837	2195	2593	465	1225	235	1471	2194
<b>Strongly Support (%)</b>	39	37	42	39	39	39	40	40	40
<b>Somewhat Support (%)</b>	37	35	39	37	34	35	41	35	38
<b>Somewhat Oppose (%)</b>	11	11	10	10	14	12	8	10	11
<b>Strongly Oppose (%)</b>	6	6	6	7	4	4	2	5	6
<b>Don't Know (%)</b>	8	11	4	7	9	10	8	10	5

**AA3.** Now suppose increases in the energy efficiency of major appliances such as refrigerators, clothes washers and dryers, central air conditioners and water heaters increased their purchase price but reduced the cost of operating them. If these price increases were offset by reduced energy bills within a THREE-YEAR time period, to what extent would you support or oppose these energy efficiency standards?

	All US Adults	Low-Income	Middle- and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	4032	1837	2195	2593	465	1225	235	1471	2194
<b>Strongly Support (%)</b>	29	24	35	30	28	28	30	26	33
<b>Somewhat Support (%)</b>	42	41	42	43	40	40	43	42	43
<b>Somewhat Oppose (%)</b>	14	16	12	17	13	14	11	16	12
<b>Strongly Oppose (%)</b>	5	6	4	5	5	5	4	5	5
<b>Don't Know (%)</b>	10	14	7	9	14	13	11	12	7

**AA4.** If these price increases were offset by reduced energy bills within a FIVE-YEAR time period, to what extent would you support or oppose these energy efficiency standards?

	All US Adults	Low-Income	Middle- and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	4032	1837	2195	2593	465	1225	235	1471	2194
<b>Strongly Support (%)</b>	25	21	29	25	28	26	27	24	27
<b>Somewhat Support (%)</b>	39	39	40	40	38	39	38	38	40
<b>Somewhat Oppose (%)</b>	17	18	16	17	16	17	16	19	17
<b>Strongly Oppose (%)</b>	8	8	7	8	5	6	6	7	8
<b>Don't Know (%)</b>	11	13	8	10	13	13	13	12	8

**AA5.** If these price increases were offset by reduced energy bills within a TEN-YEAR time period, to what extent would you support or oppose these energy efficiency standards?

	All US Adults	Low-Income	Middle-and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	4032	1837	2195	2593	465	1225	235	1471	2194
<b>Strongly Support (%)</b>	22	20	24	21	28	24	23	21	22
<b>Somewhat Support (%)</b>	32	32	32	32	28	32	35	33	32
<b>Somewhat Oppose (%)</b>	20	19	21	20	19	19	16	19	21
<b>Strongly Oppose (%)</b>	15	14	15	17	11	11	13	13	17
<b>Don't Know (%)</b>	12	15	8	11	14	14	12	13	9

**AA6.** What was the major reason for the replacement of your refrigerator? [Select one answer. Choices 01-04 were randomized.]

	All US Adults	Low-Income	Middle-and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	4032	1837	2195	2593	465	1225	235	1471	2194
<b>Yes (%)</b>	37	34	40	35	41	445	39	32	40
<b>No (%)</b>	54	54	54	59	46	534	30	54	55
<b>Don't know (%)</b>	6	8	4	4	10	102	7	10	3
<b>Not applicable</b>	2	3	2	2	3	44	4	4	1

**AA7.** What was the major reason for the replacement of your refrigerator? (Base = Refrigerator has been replaced in past five years)

	All US Adults	Low-Income	Middle- and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	1536	626	910	956	192	445	88	478	915
<b>Product Failure (%)</b>	45	50	5	49	36	39	46	45	45
<b>Performance Concerns or Lack of Features (%)</b>	16	14	14	16	18	18	19	18	16
<b>Energy Efficiency (%)</b>	13	11	11	10	18	18	17	12	15
<b>Move, New Build, or Renovation (%)</b>	18	15	15	18	17	17	2	16	20
<b>Other (%)</b>	5	7	7	5	7	5	3	6	4
<b>Don't Know (%)</b>	2	3	3	2	2	2	0	3	1

**AA8.** When your refrigerator was replaced, was it replaced with a new or used product? (Base = Refrigerator has been replaced in past five years)

	All US Adults	Low-Income	Middle- and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	1536	626	910	956	192	445	88	478	915
<b>New (%)</b>	84	74	74	86	74	79	47	70	93
<b>Used (%)</b>	15	23	23	13	21	19	9	27	7
<b>Don't know (%)</b>	1	2	2	1	4	2	0	3	0

**AA9.** Over the PAST FIVE YEARS, has the clothes washer in your primary home (past or present) been replaced?

	All US Adults	Low-Income	Middle-and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	4032	1837	2195	2593	465	1125	235	1417	2194
<b>Yes (%)</b>	40	34	46	40	41	39	36	33	45
<b>No (%)</b>	49	54	48	51	44	45	50	47	51
<b>Don't know (%)</b>	5	8	3	3	7	7	7	8	2
<b>Not applicable</b>	6	3	2	5	8	8	6	12	2

**AA10.** What was the major reason for the replacement of your clothes washer? (Base = Clothes washer has been replaced in past five years)

	All US Adults	Low-Income	Middle-and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	1665	652	1387	1083	196	453	83	489	1018
<b>Product Failure (%)</b>	54	58	52	60	45	45	45	52	55
<b>Performance Concerns or Lack of Features (%)</b>	15	14	15	14	15	14	9	15	14
<b>Energy Efficiency (%)</b>	11	10	11	9	16	16	15	12	10
<b>Move, New Build, or Renovation (%)</b>	16	12	18	13	17	20	26	14	17
<b>Other (%)</b>	4	5	3	3	5	4	4	5	3
<b>Don't Know (%)</b>	1	1	1	1	2	2	2	1	1

**AA11.** When your clothes washer was replaced, was it replaced with a new or used product? (Base = Clothes washer has been replaced in past five years)

	All US Adults	Low-Income	Middle-and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	1665	652	1387	1083	196	453	83	489	1018
<b>New (%)</b>	82	72	89	84	75	78	89	72	88
<b>Used (%)</b>	17	26	11	16	24	21	11	26	11
<b>Don't know (%)</b>	1	2	0	1	1	1	1	2	0

**AA12.** Over the PAST FIVE YEARS, has the water heater in your primary home (past or present) been replaced?

	All US Adults	Low-Income	Middle-and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	4032	1837	2195	2593	465	1125	235	1417	2194
<b>Yes (%)</b>	22	23	33	29	29	27	28	21	36
<b>No (%)</b>	58	59	57	60	55	54	54	56	59
<b>Don't know (%)</b>	10	12	7	8	12	14	12	16	4
<b>Not applicable</b>	4	5	2	3	5	5	6	7	1

**AA13.** When your water heater was replaced, was it replaced with a new or used product? (Base = Water heater has been replaced in past five years)

	All US Adults	Low-Income	Middle-and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	1162	414	748	783	130	288	62	302	784
<b>New (%)</b>	92	87	95	95	84	85	92	81	96
<b>Used (%)</b>	7	11	4	4	16	13	8	16	3
<b>Don't know (%)</b>	1	2	1	1	1	1	0	3	0

**AA14.** Over the PAST FIVE YEARS, has the major heating system/equipment in your primary home (past or present) been replaced?

	All US Adults	Low-Income	Middle-and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	4032	1837	2195	2593	465	1125	235	1417	2194
<b>Yes (%)</b>	20	16	24	21	22	19	16	13	26
<b>No (%)</b>	66	66	67	68	61	63	67	64	68
<b>Don't know (%)</b>	9	12	6	7	11	12	12	16	3
<b>Not applicable</b>	5	7	3	4	7	6	6	7	2



**AA15.** Thinking about your last major appliance purchase (major heating equipment/system, water heater, refrigerator, clothes washer), how important was energy efficiency, i.e., reduced energy consumption resulting in lower utility bills over the life of the product, in the purchase decision?

	All US Adults	Low-Income	Middle-and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	4032	1837	2195	2593	465	1125	235	1471	2194
<b>Very Important (%)</b>	39	36	42	37	46	19	16	35	44
<b>Somewhat Important (%)</b>	37	35	39	39	30	63	67	34	39
<b>Not Very Important (%)</b>	10	10	10	10	8	12	11	9	10
<b>Not Important (%)</b>	4	5	4	5	5	6	7	4	4
<b>Don't Know (%)</b>	5	7	3	4	5	0	0	7	2
<b>Not Applicable (%)</b>	5	8	3	5	5	0	0	11	1

**AA15.1** Thinking about your last major appliance purchase (major heating equipment/system, water heater, refrigerator, clothes washer), how important was energy efficiency, i.e., reduced energy consumption resulting in lower utility bills over the life of the product, in the purchase decision? (Base = Replaced a refrigerator, clothes washer, water heater, or major heating equipment/system in their primary home over the past five years)

	All US Adults	Low-Income	Middle-and High-Income	White	Black/African American	Hispanic	Asian	Renters	Homeowners
<b>Unweighted Base</b>	2788	1160	1628	1810	310	803	148	872	1664
<b>Very Important (%)</b>	44	47	46	42	53	42	40	42	47
<b>Somewhat Important (%)</b>	38	37	39	41	31	34	40	36	39
<b>Not Very Important (%)</b>	9	9	9	9	7	9	10	9	9
<b>Not Important (%)</b>	3	4	3	4	5	4	0	4	3
<b>Don't Know (%)</b>	3	4	2	3	2	6	1	4	1
<b>Not Applicable (%)</b>	2	3	1	2	2	6	0	5	1