

Battery Electric Vehicles and Low Carbon Fuel:

A Nationally Representative Multi-Mode Survey

2023 Results

Overview of Methodology

Consumer Reports fielded a nationally representative multi-mode survey of Americans to gauge their perspectives and concerns regarding the transportation industry's impact on the environment and Americans' willingness to make environmentally-friendly transportation choices. The survey measured Americans' knowledge and experiences with electric-only vehicles, their likelihood of getting one, and their perceptions about barriers preventing and incentives that would encourage them to get a battery-only electric vehicle. The survey also assessed Americans' awareness about low carbon fuel usage in vehicles and aviation and their willingness to use low carbon fuels in their personal vehicle as well as choose flights that use low carbon fuels, when they become available. The results are based on interviews conducted from June 28th, 2023 – July 14th, 2023.

The survey was administered by NORC at the University of Chicago through its AmeriSpeak[®] Panel to a nationally representative sample of adult U.S. Interviews were conducted in English and in Spanish, and were administered both online and by phone. In total NORC collected 9,030 interviews, 8,551 by web mode and 479 by phone mode, 8,858 in English and 172 in Spanish. Final data are weighted by age, gender, race/Hispanic ethnicity, housing tenure, telephone status, education, and Census Division to be proportionally representative of the US adult population.

Key demographic characteristics (after weighting is applied) of this sample are presented below: 51% female; median age of 47 years old; 61% white, non-Hispanic; 33% four-year college graduates; and 59% have a household income of \$50,000 or more.

The margin of error for results based on the total sample is +/-1.37 percentage points at the 95% confidence level. Smaller subgroups will have larger error margins, and only those subgroups for which there are at least 100 unweighted cases are included.

TOPLINE RESULTS

The questions presented below were shown to respondents in this order unless otherwise noted. Where appropriate, question verbiage, response answer choices, or direction of scales were randomized or rotated and those instances are noted below.

Also shown, where available, are trends over time. Where minor revisions to the wording of an item or response choices were made, they are noted below. Note these changes may impact comparability of results.

Prepared by CR Survey Research Department, November 2022

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Survey Notes for Trends

2022 results are based on interviews conducted from January 27 – February 18, 2022, with a nationally representative sample of 8,027 US adults.

Q1.

Do you currently have a valid driver's license or enhanced driver's li Mexico by land or water)?	cense (an EDL allows entrance to	Canada and
	2023	2022
	Total	Total
	%	%
Yes	87	86
No	13	14
Base: All respondents	8,991	7,987

Q2.

Thinking about the <u>next</u> car, truck, or SUV you will buy or lease, will this vehicle mos	st likely be:
	Total
	%
Used	42
New	34
I do not expect that I will buy or lease a vehicle in the future	11
Unsure	13
Base: All respondents	9,014

Q3/Q29. [THIS QUESTION WAS RANDOMLY ROTATED BETWEEN THIS POSITION IN THE SURVEY AND POSITION 28.]

How important or not important to you personally is the issue	e of climate change?	
	2023	2022
	Total	Total
	%	%
Very important	34	35
Somewhat important	35	35
Not too important	16	15
Not at all important	10	10
I don't know enough about it to decide	5	5
Base: All respondents	8,981	7,997

This next section is about battery electric vehicles (BEVs). This refers to vehicles like the Tesla and the Nissan Leaf that are electric ONLY and <u>do not take gasoline or any fuel other than electricity.</u>

Q4. [WORDING IN SUBSEQUENT QUESTIONS DEPENDED IN PART ON RESPONSES TO THIS ITEM. THIS WILL BE INDICATED IN SQUARE BRACKETS IN THOSE QUESTIONS.]

Do you currently own or lease an <u>electric-only</u> vehicle?		
	2023	2022
	Total	Total
	%	%
Yes	3	2
No, but I have in the past	3	3
No, I have never owned or leased one	93	95
Base: All respondents	9,006	8,008

Q5. [RANDOMIZE RESPONSE OPTIONS, HOLDING 'OTHER' AND 'I DON'T CURRENTLY OWN OR LEASE ANY VEHICLES' AT END IN THAT ORDER. 'I DON'T CURRENTLY OWN OR LEASE ANY' WAS EXCLUSIVE. IF Q4 = 'YES,' FINAL RESPONSE OPTION READ 'I DON'T CURRENTLY OWN OR LEASE ANY OTHER VEHICLES.']

In addition to what you just told us about electric-only vehicles, which, if any, kinds of vehicle(s) do you <u>currently</u> own or lease?

	Total
	%
A gasoline-powered car or truck (not hybrid)	80
A hybrid car or truck	7
A diesel-powered car or truck (not hybrid)	3
A plug-in hybrid car or truck	2
Other, please specify	1
I don't currently own or lease any vehicles	13
Base: All respondents	9,030

Q6. [RESPONDENTS WHO INITIALLY SKIPPED THIS QUESTION WERE PROMPTED TO ANSWER IT. WORDING IN SUBSEQUENT QUESTIONS DEPENDED IN PART ON RESPONSES TO THIS ITEM. THIS WILL BE INDICATED IN SQUARE BRACKETS IN THOSE QUESTIONS. TO TEST THE EFFECTS OF ITEM WORDING, THE FINAL RESPONSE OPTION DISPLAYED SLIGHTLY DIFFERENTLY TO HALF THE SAMPLE. ONLY ONE VERSION, IN WHICH THAT RESPONSE OPTION ENDED "TODAY OR EVER," IS SHOWN HERE. THIS WAS DIFFERENT FROM THE VERSION ASKED IN 2022, SO NO TRENDS ARE SHOWN.]

Which statement below BEST describes your thoughts on buying or leasing [if Q4 = Yes or No, but I have in the past, "another"; otherwise, "an"] electric-only vehicle if you were to buy or lease a vehicle today?

	Total
	%
I would definitely buy or lease an electric-only vehicle.	10
I would seriously consider buying or leasing an electric-only vehicle.	21
I might consider getting an electric-only vehicle in the future, but not if I were to buy or lease a vehicle today	37
I would not consider getting [if Q4 = Yes or No, but I have in the past, "another"; otherwise, "an"] electric-only vehicle today or	
ever.	31
Base: Respondents for whom the final response option ended with "today or ever." Half of respondents saw a different version, excluded here	4,483

INFO2. [INFO TEXT SHOWN TO RESPONDENTS.]

The experience of owning an electric-only vehicle is quite different than owning a gasoline-powered vehicle. Some differences include charging vs. fueling, the frequency of maintenance/repairs, costs involved with buying, owning, and maintaining the vehicle, etc. For this next question we would like to understand your level of familiarity with electric-only vehicles.

Q7. [SHOW Q7 AND INFO2 ON THE SAME SCREEN. ROTATE RESPONSE SCALE.]

How familiar would you say you are with the fundamentals of owning an <u>electric-only</u> vehicle?			
		2023	2022
		Total	Total
		%	%
Very familiar		11	9
Somewhat familiar		35	31
Not too familiar		31	31
Not at all familiar		23	29
Base: All respondents		9,016	8,013

INFO2A. [INFO TEXT SHOWN TO RESPONDENTS.]

As a reminder for this section of the survey, we are asking about <u>electric-only</u> vehicles that do not take gasoline or any fuel other than electricity.

Q8. [SHOW IF Q6 = 'I WOULD SERIOUSLY CONSIDER...', 'I MIGHT CONSIDER...', OR 'I WOULD NOT CONSIDER GETTING AN ELECTRIC-ONLY VEHICLE.' IF Q6 = 'I WOULD SERIOUSLY CONSIDER...', INCLUDE 'POTENTIALLY' IN THE QUESTION STEM: '....WOULD POTENTIALLY PREVENT YOU...'. RANDOMIZE RESPONSE OPTIONS, HOLDING 'OTHER', 'NOTHING; I JUST DON'T FEEL LIKE I KNOW ENOUGH', AND 'NOTHING: I HAVE NO INTEREST' AT THE END IN THAT ORDER. 'NOTHING; I JUST DON'T FEEL LIKE I KNOW ENOUGH' AND 'NOTHING: I HAVE NO INTEREST' WERE EXCLUSIVE.]

Of the following attributes, which, if any, would [if Q6 = seriously consider, add "potentially"] prevent you from buying or leasing [if Q4 = Yes or No, but I have in the past, "another"; otherwise, "an"] <u>electric-only</u> vehicle if you were to buy or lease a vehicle today?

	2023	2022
	Total	Total
	%	%
Charging logistics, such as where and when I'd be able to charge it	62	61
Number of miles the vehicle can go before it needs to be charged	56	55
Costs involved with buying, owning, and maintaining an electric-only vehicle	56	52
Not being able to fix the car myself or at my local mechanic	41	37
Concern about the performance of an electric-only vehicle in cold weather	33	30
I'd worry that it would not be as powerful as a gasoline-powered vehicle	17	18
They are not common where I live	16	15
Lack of models among electric-only vehicles currently on the market	15	15
I'm not sure where I'll be living in the next few years	10	10
I don't like the style/look of any of the models that are currently available	9	9
I'm afraid the technology would be hard to use	9	8
Other, please specify	6	4
Nothing; I just don't feel I know enough about electric-only vehicles to buy one	5	6
Nothing; I have no interest in getting [if Q4 = Yes or No, but I have in the past,		
"another"; otherwise, "an"] electric-only vehicle if I were to buy or lease a vehicle	11	12
Base: Respondents who said something other than they "definitely" would buy or lease an electric-only vehicle if they were to buy or lease a vehicle today	8,191	6,960

Q9. [SHOW IF 'COSTS INVOLVED WITH BUYING, OWNING, AND MAINTAINING AN ELECTRIC-ONLY VEHICLE' SELECTED IN Q8. IF Q6 = 'I WOULD SERIOUSLY CONSIDER...', INCLUDE 'POTENTIALLY' IN THE QUESTION STEM: '....WOULD POTENTIALLY PREVENT YOU...'. RANDOMIZE RESPONSE OPTIONS, KEEPING 'CHARGING COSTS AT CHARGING STATIONS' AND 'INCREASE IN COST TO MY ELECTRIC BILL' TOGETHER, AND HOLDING 'OTHER COSTS' AT THE END. RESPONDENTS COULD SELECT UP TO TWO.]

You told us that <u>cost-related</u> factors would [if Q6 = seriously consider, add "potentially"] prevent you from buying or leasing [if Q4 = Yes or No, but I have in the past, "another"; otherwise, "an"] <u>electric-only</u> vehicle if you were to buy or lease a vehicle today. Specifically, which <u>two</u> of the following cost considerations would be most likely to hold you back?

Please select <u>up to two</u> that apply.

	2023	2022
	Total	Total
	%	%
Purchase price	54	58
Maintenance and repair costs	39	40
Battery replacement costs	35	29
The cost to install a home charger	30	30
Increase in cost to my electric bill	16	17
Charging costs at charging stations	13	15
Higher state registration fees for electric-only vehicles	5	3
Other costs, please specify	2	1
Base: Respondents who said cost-related factors would prevent them from buying or leasing an electric- only vehicle if they were to buy or lease a vehicle today	4,706	3,872

Q10. [SHOW IF = 'CHARGING LOGISTICS' SELECTED IN Q8. IF Q6 = 'I WOULD SERIOUSLY CONSIDER...', INCLUDE 'POTENTIALLY' IN THE QUESTION STEM: '....WOULD POTENTIALLY PREVENT YOU...'. RANDOMIZE RESPONSE OPTIONS, HOLDING 'OTHER CHARGING CONSIDERATIONS' AT THE END. RESPONDENTS COULD SELECT UP TO TWO.]

You told us that things related to charging are [if Q6 = seriously consider, add "potentially"] preventing you from buying or leasing [if Q4 = Yes or No, but I have in the past, "another"; otherwise, "an"] <u>electric-only</u> vehicle if you were to buy or lease a vehicle today. Specifically, which <u>two</u> of the following considerations would be most likely to hold you back?

Please select up to two that apply.		
	2023	2022
	Total	Total
	%	%
Not enough public charging stations	51	59
Inconvenience of charging	45	42
Nowhere to plug in my car to charge at home	42	44
Long charging times	41	37
Concern about my safety when I charge at public charging stations	10	8
Other charging considerations, please specify	3	2
Base: Respondents who said charging considerations would prevent them from buying or leasing an electric-only vehicle if they were to buy or lease a vehicle today	5,442	4,459

Q11. [RANDOMIZE RESPONSE OPTIONS, HOLDING 'OTHER' AND 'NONE OF THESE WOULD ENCOURAGE ME' AT THE END IN THAT ORDER. 'NONE OF THESE WOULD ENCOURAGE ME' WAS EXCLUSIVE. RESPONDENTS COULD SELECT UP TO THREE.]

Below are attributes that an electric-only vehicle might have. Which, if any, of these would <u>most</u> encourage you to buy or lease [if Q4 = Yes or No, but I have in the past, "another"; otherwise, "an"] <u>electric-only</u>vehicle?

Please select <u>up to three</u> that apply.

	2023	2022
	Total	Total
	%	%
Costs less to charge than fueling a gasoline-powered vehicle	32	33
vehicle	28	31
Lower maintenance costs than gasoline-powered vehicles	26	28
Avoids using gasoline	26	27
No tailpipe emissions (exhaust fumes)	23	23
Similar purchase price to gasoline-powered vehicles in the same class	17	21
Has all the latest technology	12	11
No engine noise	12	10
More reliable than gasoline-powered vehicles	11	16
Better acceleration than gasoline-powered vehicles	8	8
Attractive styling or other aesthetic features	5	6
Other, please specify	1	1
None of these would encourage me to get [if Q4 = Yes or No, but I have in the past,		
"another"; otherwise, "an"] electric-only vehicle	22	19
Base: All respondents	9,030	8,027

Q12. [SHOW IF 'AVOIDS USING GASOLINE' SELECTED IN Q11. RANDOMIZE RESPONSE OPTIONS, HOLDING 'OTHER' AT THE END.]

Which, if any, of the following are reasons that <u>avoiding using gasoline</u> would encourage you to buy or lease [if Q4 = Yes or No, but I have in the past, "another"; otherwise, "an"] electric-only vehicle?

	2023	2022
	Total	Total
	%	%
I believe emissions from gasoline-powered vehicles pollute the environment	73	74
Gas is too expensive	69	70
I believe oil companies pollute land and contaminate water supplies	60	61
I don't like having to pump gas	21	23
Other, please specify	3	1
Base: Respondents who said that avoiding gasoline is a reason that would most encourage them to buy or lease an electric-only vehicle	2,361	2,176

Q13. [RANDOMIZE RESPONSE OPTIONS, HOLDING 'OTHER' AND 'NONE OF THESE' AT THE END IN THAT ORDER. 'NONE OF THESE' WAS EXCLUSIVE. RESPONDENTS COULD SELECT UP TO TWO.]

Which <u>two</u> , if any, of the following charging options would be <u>most</u> likely to e <u>electric-only</u> vehicle?	ncourage you to buy	or lease an
Please select up to two that apply.		
	2023	2022
	Total	Total
	%	%
Free public charging stations	49	50
or less	44	45
Ability to charge it where I live	42	47
Access to workplace charging stations	10	10
Other, please specify	1	1
None of these would encourage me to get [if Q4 = Yes or No, but I have in the past,		
"another"; otherwise, "an"] electric-only vehicle	21	18
Base: All respondents	9,030	8,027

Q14. [RANDOMIZE RESPONSE OPTIONS, KEEPING 'TAX CREDITS OR DISCOUNTS FOR A <u>NEW</u> ELECTRIC-ONLY VEHICLE' AND 'TAX CREDITS OR DISCOUNTS FOR A <u>USED</u> ELECTRIC-ONLY VEHICLE' TOGETHER, AND HOLDING 'OTHER' AND 'I HAVE NOT HEARD OF ANY INCENTIVES' AT THE END IN THAT ORDER. 'I HAVE NOT HEARD OF ANY INCENTIVES' WAS EXCLUSIVE.]

The following incentives are currently available for <u>electric-only</u> vehicle owners. Which, if any, of the following have you heard about?

	2023	2022
Response options differed slightly in 2022 and 2023:		
	Total	Total
	%	%
Tax credits or discounts for the purchase or lease of a <u>new</u> electric-only vehicle	47	-
Tax rebates/discounts at the time of purchase or lease	-	34
Tax credits applied at a later time (such as, when you file your income taxes)	-	28
Discounts to install a home charger	22	18
Exemptions from vehicle emissions inspections	20	18
Tax credits or discounts for the purchase or lease of a <u>used</u> electric-only vehicle	19	-
Access to carpool lanes even when driving alone	15	15
Discounted charging rates	13	13
Other, please specify	0	0
I have not heard of any incentives available for electric-only vehicle owners	39	46
Base: All respondents	9,030	8,027

Q15. [RANDOMIZE RESPONSE OPTIONS, KEEPING 'TAX REBATES/DISCOUNTS <u>AT THE TIME</u> OF PURCHASE' AND 'TAX CREDITS APPLIED <u>AT A LATER</u> TIME' TOGETHER; KEEPING 'TAX CREDITS OR DISCOUNTS FOR A <u>NEW</u> ELECTRIC-ONLY VEHICLE' AND 'TAX CREDITS OR DISCOUNTS FOR A <u>USED</u> ELECTRIC-ONLY VEHICLE' TOGETHER; AND HOLDING 'OTHER' AND 'NONE OF THESE WOULD INFLUENCE MY DECISION' AT THE END IN THAT ORDER. 'NONE OF THESE WOULD INFLUENCE MY DECISION' WAS EXCLUSIVE.]

The following are incentives that are either already available for electric-only vehicle owners or are being considered by local or national government. Which, if any, do you believe would encourage you to buy or lease [if Q4 = Yes or No, but I have in the past, "another"; otherwise, "an"] <u>electric-only</u> vehicle?

Please select <u>all</u> that apply.

	2023	2022
Response options differed slightly in 2022 and 2023:		
	Total	Total
	%	%
Tax rebates/discounts at the time of purchase or lease	48	53
Discounts to install a home charger	46	49
Tax credits or discounts for the purchase or lease of a <u>new</u> electric-only vehicle	43	-
Discounted charging rates	38	41
Tax credits or discounts for the purchase or lease of a <u>used</u> electric-only vehicle*	36	41
Tax credits applied at a later time (such as, when you file your income taxes)	35	45
Exemptions from vehicle emissions inspections	26	27
Access to carpool lanes even when driving alone	19	19
Other, please specify	1	1
None of these would influence my decision to get [if Q4 = Yes or No, but I have in the		
past, "another"; otherwise, "an"] electric-only vehicle	29	27
Base: All respondents		
*Note: The 2022 version of this response option was "Government incentives for used electric-only	9,030	8,027
vehicles," which is not fully comparable to the 2023 version		

INFO3. [INFO TEXT SHOWN TO RESPONDENTS.]

As a reminder for this section of the survey, we are asking about <u>electric-only</u> vehicles that do not take gasoline or any fuel other than electricity.

Q16. [RANDOMIZE GRID ITEMS.]

Please indicate whether each of the following statements is <u>true</u> or <u>not true</u> for you.	
Thease indicate whether each of the following statements is <u>the</u> of <u>hor inde</u> for you.	
	Total
In the <u>past month</u> , I have seen an electric-only vehicle in my neighborhood	
	%
True	57
Not true	43
Base: All respondents	8,970
I have a friend, relative, or co-worker who owns an electric-only vehicle	
	%
True	37
Not true	63
Base: All respondents	8,975
In the past <u>12 months</u> , I have been a passenger in an electric-only vehicle	
	%
True	21
Not true	79
Base: All respondents	8,979
In the past <u>12 months</u> , I have driven an electric-only vehicle	
	%
True	9
Not true	91
Base: All respondents	8,975

INFO4. [INTRO TEXT SHOWN TO RESPONDENTS.]

Alternative low carbon fuels are becoming more available in the US as an alternative to traditional, petroleum-based fuels. The use of these fuels in vehicles can reduce the impact to the environment by at least 50% compared to traditional fuels.

For the purpose of this survey we are asking about "drop-in fuels." <u>These are low carbon fuels that can be used with</u> <u>your current vehicle.</u> While much is unknown at the moment, we'd like to understand your thoughts on using these low-carbon fuels in your personal gasoline-powered vehicle.

Q17. [SHOW Q17 AND INFO4 ON THE SAME SCREEN.]

Before taking this survey, had you heard about the use of low carbon fuels in vehicles?		
	2023	2022
	Total	Total
	%	%
Yes	25	25
No	56	60
Unsure	19	15
Base: All respondents	9,007	8,015

Q18. [RESPONDENTS ALSO SAW A 'NOT APPLICABLE' RESPONSE OPTION. THOSE WHO CHOSE IT WERE REMOVED FROM THE BASE DURING ANALYSIS AND ARE NOT SHOWN HERE.]

If the cost for a gallon of low carbon fuel (that is, fuels with lower carbon emissiosn compared to traditional fuel) was the same as the cost for a gallon of traditional fuel, how likely would you be to use low carbon fuel in your personal vehicle?

	2023	2022
	Total	Total
	%	%
Very likely	32	34
Somewhatlikely	32	33
Not too likely	9	8
Not at all likely	7	5
Unsure	20	20
Base: All respondents, excluding those who said "not applicable"	8,822	7,850

Q19. [SHOW IF Q18 = 'NOT TOO LIKELY' OR 'NOT AT ALL LIKELY.' RANDOMIZE RESPONSES, HOLDING 'OTHER' AT THE END.]

You said you would be unlikely to use low carbon fuel instead of traditional gasoline (that is, petroleum-based fuel) in
your personal vehicle. Which, if any, are the reasons why?Please select all that apply.20232022TotalTotalTotalM%%Concern that low carbon fuel could damage my vehicle4340Concern that low carbon fuels could negatively affect the performance of my vehicle4042

Concern that low carbon fuel could damage my vehicle	43	40
Concern that low carbon fuels could negatively affect the performance of my vehicle	40	42
I am happy with vehicles that use traditional fuel and wouldn't want to change	35	32
I'm not convinced that low carbon fuels would be better for the environment	33	29
Concern that low carbon fuels would get fewer miles per gallon than traditional gasoline	33	32
Wouldn't trust the reliability of a vehicle that runs on low carbon fuels	31	27
Concern about the availability of the low carbon fuel	31	28
Concern about the safety of a vehicle that runs on low carbon fuels	22	22
Concern that low carbon fuel would cost more	22	26
I already reduce my carbon footprint in other ways	13	10
Other, please specify	5	2
Base: Respondents who said they would be unlikely to use low carbon fuel in their personal vehicle even if it was the same cost as traditional fuel	1,392	1,104

Q20. [SHOW IF Q18 = 'SOMEWHAT LIKELY' OR 'VERY LIKELY.' RANDOMIZE RESPONSES, HOLDING 'NO PARTICULAR REASON' AND 'OTHER' AT THE END IN THAT ORDER. 'NO PARTICULAR REASON' WAS EXCLUSIVE.]

You said that you would be at least somewhat likely to use low carbon fuel in your own vehicle if it cost the same as a gallon of traditional fuel. Which, if any, of the following factors contribute to your willingness to use low carbon fuel?

	Total
	%
I believe that low carbon fuels create less pollution than traditional fuels	64
I believe that low carbon fuels have lower greenhouse gas emissions than traditional fuels	58
I see using low carbon fuels as a stepping stone between using traditional fuels and getting a fully electric	
vehicle	33
I believe low carbon fuels will have less wear and tear on my vehicle than traditional fuels	15
I believe low carbon fuels have better fuel economy (miles per gallon) than traditional fuels	15
I enjoy being an early adopter of new or advanced technology	12
I believe low carbon fuels provide better acceleration than gasoline	6
No particular reason, I just might as well use them	16
Other, please specify	2
Base: Respondents who said they would be at least somewhat likely to use low carbon fuel in their personal vehicle if it was the same cost as traditional fuel	5,781

Q21. [ROTATE 'SUPPORT' AND 'OPPOSE' IN QUESTION STEM AND ROTATE RESPONSE SCALE TO MATCH, ALWAYS HOLDING 'UNSURE' AT END.]

Low-income and disadvantaged communities are more vulnerable to the direct impact of vehicle emissions that contribute to climate change and air pollution. However, it can be harder for these communities to access "cleaner" vehicles and fuels that can reduce the emissions and greenhouse gasses that contribute to climate change.

Some people propose that companies that produce clean fuels should invest in projects that serve low-income and disadvantaged communities, like cleaner public transportation, installing public charging stations for electric or hybrid vehicles, providing subsidies for purchasing cleaner vehicles, and so on.

Would you support or oppose requiring clean fuel producers to invest in these kinds of projects in these communities?

	Total
	%
Strongly support	29
Strongly support Somewhat support	34
Somewhat oppose	9
Strongly oppose	8
Unsure	21
Base: All respondents	8,982

INFO5. [INTRO TEXT SHOWN TO RESPONDENTS.]

Airlines are considering using more efficient fuel called sustainable aviation fuel (SAF). SAF is a renewable, lowcarbon intensity substitute for conventional jet fuel. SAF is widely considered the best approach to rapidly reducing greenhouse gas emissions from commercial and business aviation. While this fuel is very new, we'd like to understand your thoughts on flying on airplanes that use these fuels.

Q22. [SHOW Q22 AND INFO5 ON THE SAME SCREEN.]

Before taking this survey, had you heard about the use of sustai	nable aviation fuel (SAF) in airplanes	?
	2023	2022
	Total	Total
	%	%
Yes	12	11
No	75	79
Unsure	13	10
Base: All respondents	8,992	8,005

Q23.

During a <u>typical</u> year, approximately how many times reasons?	do you take a round trip flight for pe	rsonal or bi	usiness
	2	023	2022
	Г	Total	Total
		%	%
0 - I never fly		44	44
1 to 2		38	39
3 to 4		10	10
5 to 6		4	4
7 to 8		2	1
9 to 10		1	0
More than 10		2	2
Base: All respondents	g	,005	8,006

INFO6. [INFO TEXT SHOWN TO RESPONDENTS.]

For this next question, please answer based on what you know today. We understand that you may change your mind if more information were to come out.

Q24.

If you had a choice, how likely would you be to choo	ose a flight on a plane that uses l	low carbon fue	l if the <u>cost of a</u>
ticket was the same as flying on a plane that uses the			
		2023	2022
		Total	Total
		%	%
Very likely		28	33
Somewhat likely		29	29
Not too likely		10	9
Not at all likely		10	8
Unsure		24	21
Base: All respondents		9,007	8,010

Q25. [SHOW IF Q24 = 'NOT TOO LIKELY' OR 'NOT AT ALL LIKELY' AND Q23 IS NOT 'I NEVER FLY.' RANDOMIZE RESPONSES, HOLDING 'OTHER' AT THE END.]

You said you would be unlikely to fly on a plane that uses low carbon fuel. Which,	if any, are the reaso	ns why?
Please select <u>all</u> that apply.		
	2023	2022
	Total	Total
	%	%
I wouldn't trust planes that fly on this new low carbon fuel will be as safe	47	40
I wouldn't trust the reliability of the service of planes that fly on low carbon fuel given the new technology	45	38
I am happy with my experience flying on planes that run on traditional jet fuel and		
wouldn't want to change	38	41
I don't believe in climate change	17	12
I already reduce my carbon footprint in other ways	11	9
Other, please specify	9	15
Base: Respondents who fly and said they would be unlikely to choose a flight on a plane that uses low carbon fuel even if the cost of the ticket was the same as flying on a plane that uses traditional jet fuel	863	649

INFO7. [INTRO TEXT SHOWN TO RESPONDENTS.]

Commercial truck manufacturers are increasing their electric-only truck fleets. Retailers and shipping companies have started using these electric-only vehicles.

Q26.

While many online retailers provide free shipping to their customers, would you be willing to forego free shipping, or pay more when shopping at retailers where free shipping is not an option, if a company uses an <u>electric-only</u> delivery truck?

	2023	2022
	Total	Total
	%	%
Yes	14	17
No	49	45
Not applicable - I rarely use online retailers	11	10
Unsure	25	28
Base: All respondents	8,987	8,004

Q27. [RANDOMIZE RESPONSE OPTIONS, HOLDING 'OTHER' AND 'I NEVER USE PUBLIC TRANSPORTATION' AT END IN THAT ORDER. 'I NEVER USE PUBLIC TRANSPORTATION' WAS EXCLUSIVE.]

Which, if any, of the following are reasons you use public transportation?	
Please select all that apply.	
	Total
	%
I don't have to worry about traffic	17
It's cheaper than driving myself	13
It's better for the environment	12
It's more convenient for me	11
I get more exercise walking to and from the station, stop, or transit center	9
It frees up my time to do other things	8
I don't have a car	7
It's safer than driving	7
I don't have a driver's license	4
Other, please specify	3
I never use public transportation	63
Base: All respondents	9,030

Q28. [RESPONDENTS ALSO SAW A 'NOT APPLICABLE' RESPONSE OPTION. THOSE WHO CHOSE IT WERE REMOVED FROM THE BASE DURING ANALYSIS AND ARE NOT SHOWN HERE.]

Overall, how important or not important is <u>impact on the environmer</u> decisions?	nt when making the following t	ransportation
	2023	2022
Buying or leasing a vehicle	, , , , , , , , , , , , , , , , , , ,	•
	%	%
Very important	17	18
Somewhat important	40	43
Not too important	28	25
Not at all important	15	14
Base: All respondents, excluding those who said "not applicable"	8,286	7,403
Deciding about how to get to and from a destination (such as walking, cycling, car, rail, air travel, public bus, subway, etc.)	driving a	
	%	%
Very important	24	23
Somewhat important	33	35
Not too important	26	26
Not at all important	16	16
Base: All respondents, excluding those who said "not applicable"	8,239	7,314

NOTE: [Q3/29 RANDOMLY SHOWN HERE OR EARLIER IN THE SURVEY. SEE PAGE 2 FOR RESULTS.]

Q30. [ROTATE SCALE.]

In your day-to-day life (shopping, transportation, household behaviors, food choices, etc.), how much control do you believe you have over your personal impact on the environment?

	2023	2022
	Total	Total
	%	%
A lot of control	12	14
Some	45	48
Very little No control	35	31
No control	8	7
Base: All respondents	8,961	7,982

Q31.

How many days a week do you currently commute to work or school?	
If you work or attend school from home, please select "0"; if you do not work at all and applicable."	are not a student, please select "Not
	Total
	%
0	18
1	2
2	4
3	6
4	7
5	26
6	4
7	4
Not applicable - I do not work or attend school	29
Base: All respondents	8,982

Q32. [SHOW IF Q31 = CURRENTLY COMMUTE TO WORK AT LEAST ONE DAY A WEEK.]

Approximately how long is your round trip commute to work or school?	
	Total
	10tai
Less than 5 miles	19
5 to 10 miles	22
11 to 15 miles	14
16 to 20 miles	12
21 to 30 miles	14
31 to 40 miles	8
41 to 50 miles	5
More than 50 miles	7
Base: Respondents who commute one to seven days a week to work or school	4,370

Q33. [IN 2023, SHOW IF ANY VEHICLE TYPE, INCLUDING 'OTHER,' SELECTED IN Q5 OR IF Q4 = 'YES' AND Q5 = 'I DON'T CURRENTLY OWN OR LEASE ANY OTHER VEHICLES.' 2022 FILTERING LOGIC WAS DIFFERENT, BUT THE FINAL BASE WAS THE SAME: RESPONDENTS WHOSE HOUSEHOLDS HAD AT LEAST ONE VEHICLE.]

In a typical week (7 days), what is the <u>total</u> amount of time you spend drivir	ng?	
Please include ALL of the driving you do during the week and on weekends (such as recreational outings, etc.)	commuting, errands, appoin	tments,
	2023	2022
	Total	Total
	%	%
Less than an hour	11	16
1 hour but less than 2 hours	16	18
2 hours but less than 3 hours	18	17
3 hours but less than 4 hours	13	12
4 hours but less than 5 hours	10	9
5 hours but less than 6 hours	8	6
6 hours but less than 7 hours	5	5
7 hours but less than 8 hours	4	4
8 hours but less than 9 hours	3	3
9 hours but less than 10 hours	2	2
10 hours or more	9	8
Base: Respondents whose household currently owns or leases at least one vehicle	8,035	7,635

Q34. [SHOW IF ANY VEHICLE TYPE, INCLUDING 'OTHER,' SELECTED IN Q5 OR IF Q4 = 'YES' AND Q5 = 'I DON'T CURRENTLY OWN OR LEASE ANY OTHER VEHICLES.']

How would you BEST describe your current parking situation at home? Would you	say you park in	
	2023	2022
	Total	Total
	%	%
Private, off-street parking such as a garage or dedicated spot <u>with access</u> to an electric outlet	41	48
Private, off-street parking such as a garage or dedicated spot <u>without access</u> to an electric outlet	38	34
Private, off-street parking such as a garage or dedicated spot but you <u>do not know</u> if there is access to an electric outlet	7	7
Public or on-street parking	11	9
Other, please specify	3	3
Base: Respondents whose household currently owns or leases at least one vehicle	8,009	7,556

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