July 11, 2022

Clean Vehicle Fleets & Public Opinion: Colorado

Living Consumer Intelligence | business.yougov.com

Prepared for Advanced Energy Economy (AEE)

METHODOLOGY

SAMPLE SIZE:

COLORADO: N=600

MARGIN OF ERROR OF +/- 4.42 %

FIELD DATES OF 6/8 – 6/16

The Poll was conducted by YouGov using state-wide representative samples of 1200 Colorado and Illinois residents interviewed online between June 8th and June 16th. This report includes findings from n=600 residents of Colorado.

The sample was weighted according to gender, age, race, and education based on the American Community Survey, conducted by the U.S. Bureau of the Census, as well as 2016 and 2020 Presidential vote, and a three-way stratification of gender, age (4-categories), and education (4-categories), a three-way stratification of gender, age (4-categories), and race (4-categories), and a two-way stratification of education (4-categories) and race (4-categories) to produce the weights by state. Respondents were selected from YouGov's opt-in panel to be representative of residents of both states. The Colorado weights range from 0.20 to 5.00, with a mean of 1.00 and a standard deviation of 0.47.

The margin of error (a 95% confidence interval) for a sample percentage p based upon the Colorado sample is approximately 4.42%. It is calculated using the formula
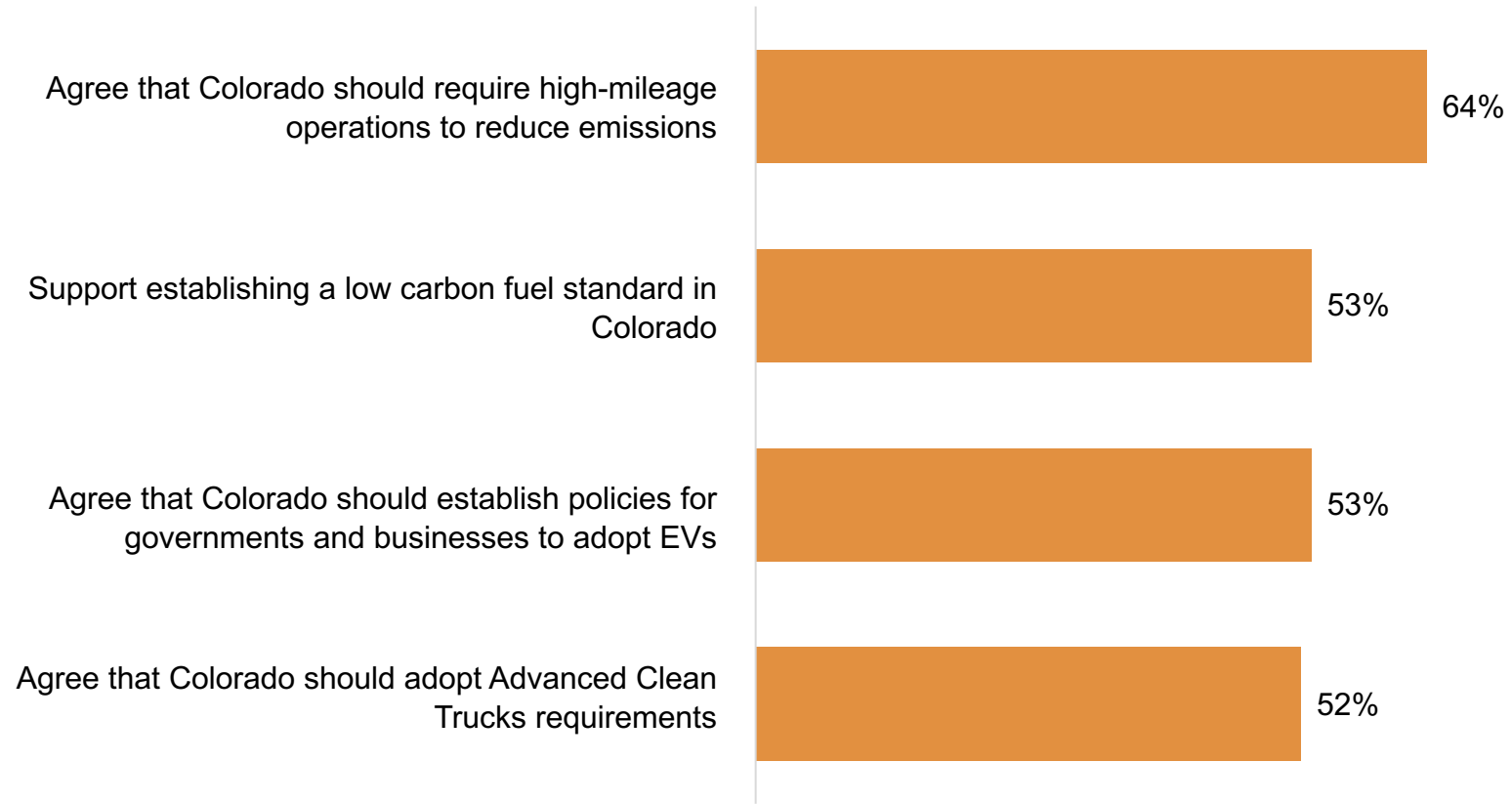
$$\hat{p} \pm 100 \times \sqrt{(1+⟦CV⟧^2)/n}$$

where CV is the coefficient of variation of the sample weights and n is the sample size used to compute the proportion. This is a measure of sampling error (the average of all estimates obtained using the same sample selection and weighting procedures repeatedly). The sample estimate should differ from its expected value by less than margin of error in 95 percent of all samples. It does not reflect non-sampling errors, including potential selection bias in panel participation or in response to a particular survey.
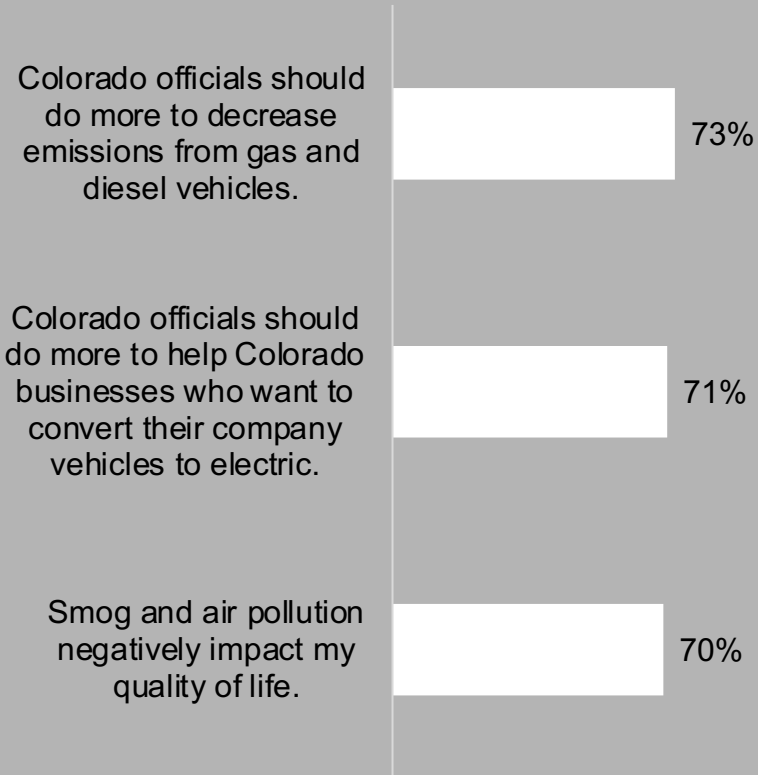
EXECUTIVE SUMMARY

MORE THAN HALF OF COLORADO RESIDENTS SURVEYED ARE SUPPORTIVE OF INCREASED LEGISLATION SURROUNDING EVS AND STRICTER CLEAN ENERGY REQUIREMENTS. RESPONDENTS ARE PARTICULARLY SUPPORTIVE OF LEGISLATION REQUIRING HIGH-MILEAGE OPERATIONS TO REDUCE EMISSIONS OVER TIME.

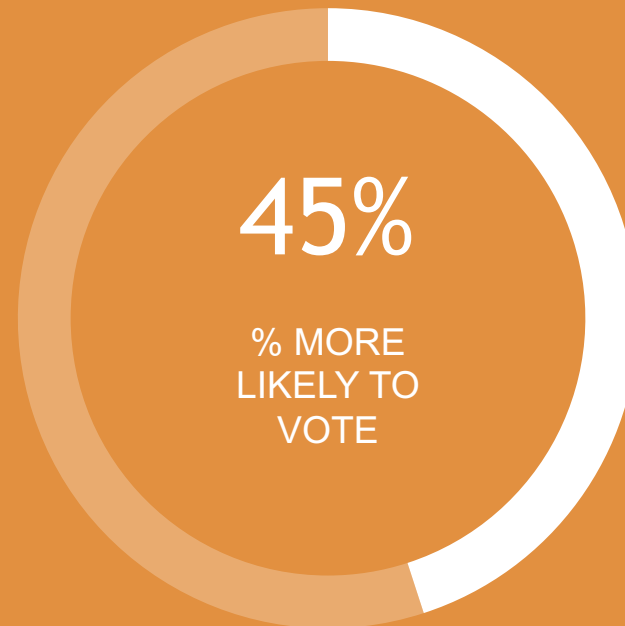| Category	Percentage
Agree that Colorado should require high-mileage operations to reduce emissions	64%
Support establishing a low carbon fuel standard in Colorado	53%
Agree that Colorado should establish policies for governments and businesses to adopt EVs	53%
Agree that Colorado should adopt Advanced Clean Trucks requirements	52%

A vast majority of Colorado residents agree that state officials should be doing more to decrease emissions from gas and diesel vehicles and to help businesses convert to using EVs. A majority are also concerned about the impact smog and pollution have on their lives.

A majority of Colorado residents are highly concerned about emissions, smog, and pollution in their immediate environment, and think that state officials are not doing enough to address these concerns.

As a result, residents surveyed across the state want to see officials take action and pledge to focus on ameliorating these concerns.

Colorado officials should do more to decrease emissions from gas and diesel vehicles.

73%

Colorado officials should do more to help Colorado businesses who want to convert their company vehicles to electric.

71%

Smog and air pollution negatively impact my quality of life.
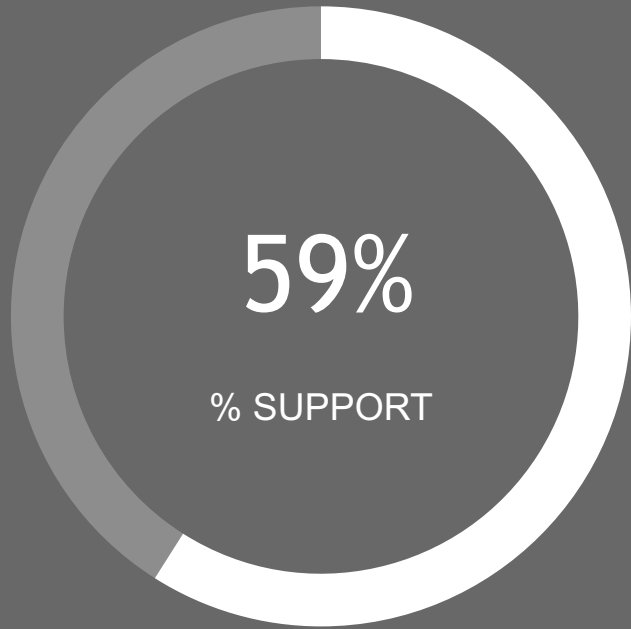
70%

45%

% MORE LIKELY TO VOTE

Nearly half of Colorado residents surveyed are more likely to vote for a candidate who focuses on reducing emissions from vehicles.

Only 16% say it would make them less likely to vote for that candidate.
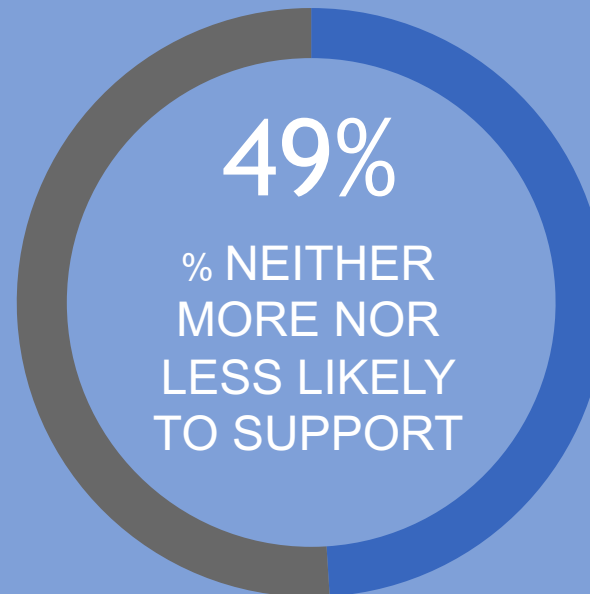
59%

% SUPPORT

Colorado residents are generally positive about the possibility of implementing EVs across the state, especially in cases where rebates and incentives are offered for eligible vehicles.

When presented with the possibility of limitations on these rebates, around half of surveyed residents are unaffected and may still support legislation that would require the state to transition to EVs in the future.

A majority of Coloradans surveyed support legislation that would put into place rebates for the purchase of an electric medium- or heavy-duty vehicles (like vans, trucks, or buses) for commercial use.
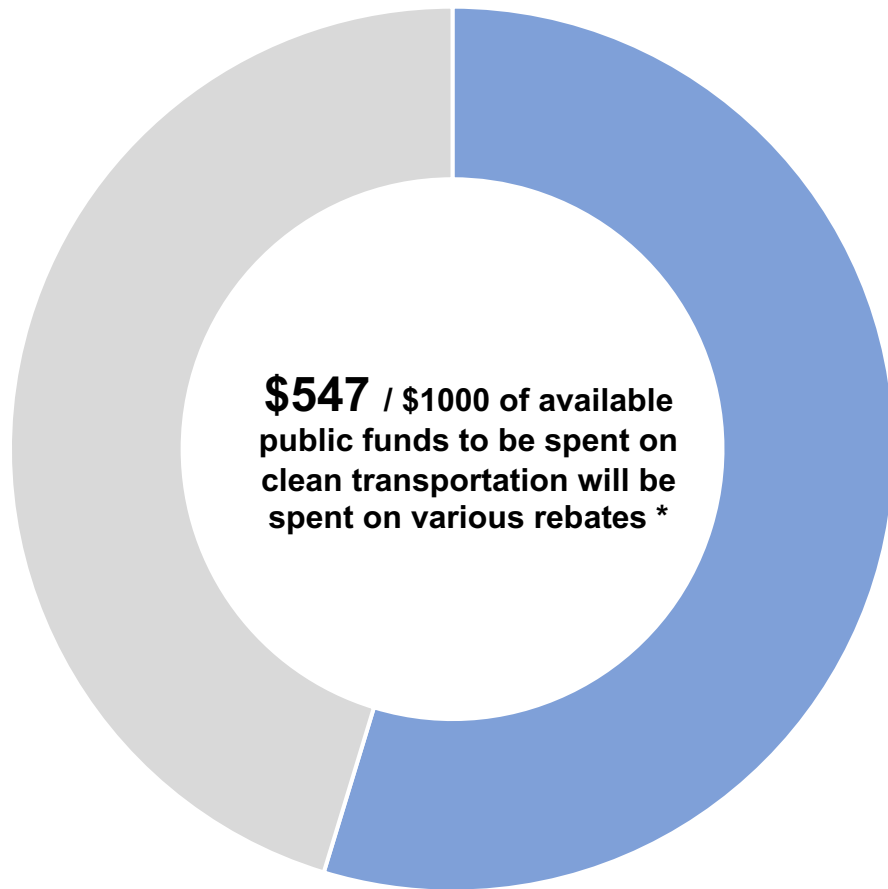
49%

% NEITHER MORE NOR LESS LIKELY TO SUPPORT

Nearly half of Coloradans surveyed are unaffected by various potential limitations on EV rebate legislation; only ~1/4 are more likely and ~1/4 are less likely to support the legislation if there are limitations on rebates.
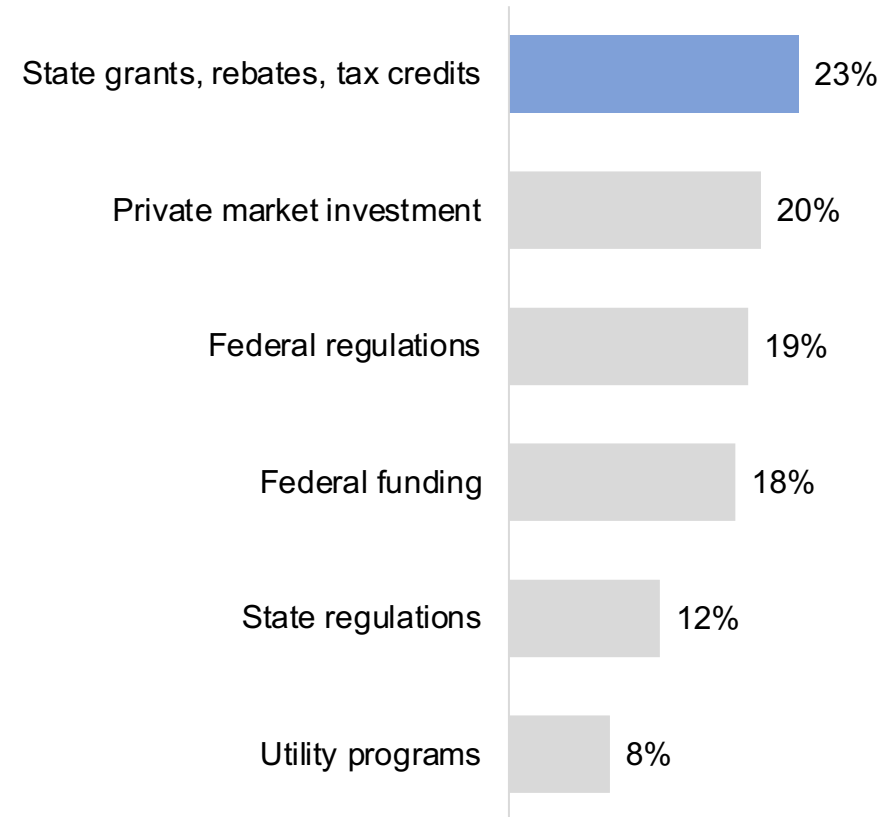
* Results reported are an average of all "neither more nor less likely" responses to all items in Q6

OVERALL, COLORADO RESIDENTS SURVEYED WOULD SPEND MORE THAN HALF OF AVAILABLE PUBLIC FUNDS ON REBATES FOR PURCHASING EVS AND FOR RESIDENTIAL CHARGING EQUIPMENT. REBATES ARE VIEWED AS THE MOST EFFECTIVE TOOL TO REPLACE GAS-POWERED VEHICLES WITH ELECTRIC VERSIONS.

How much money would you spend on each of the following programs (mean allocation out of $1000)?

$547 / $1000 of available public funds to be spent on clean transportation will be spent on various rebates *

What is the most effective tool to replace aging diesel with electric? (% who ranked each item as most effective)

State grants, rebates, tax credits	23%
Private market investment	20%
Federal regulations	19%
Federal funding	18%
State regulations	12%
Utility programs	8%

* Results reported are a net score of "Rebate for passenger electric vehicles," "Rebate for medium- and heavy-duty vehicles," and "Residential electric vehicle charging equipment rebates"
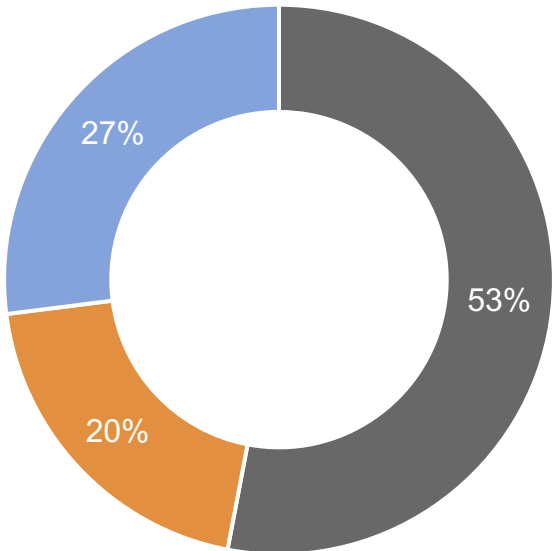
Support for policies, legislation, and incentives programs to encourage EV adoption
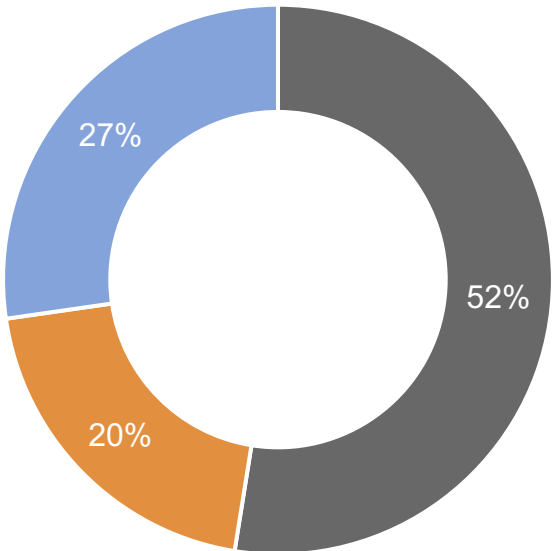
MORE THAN HALF OF COLORADO RESIDENTS SURVEYED SUPPORT VARIOUS POLICIES THAT WOULD REQUIRE BUSINESSES AND AUTO MANUFACTURERS IN THE STATE TO INCREASE EV PREVALENCE AND REDUCE EMISSIONS.

YouGov

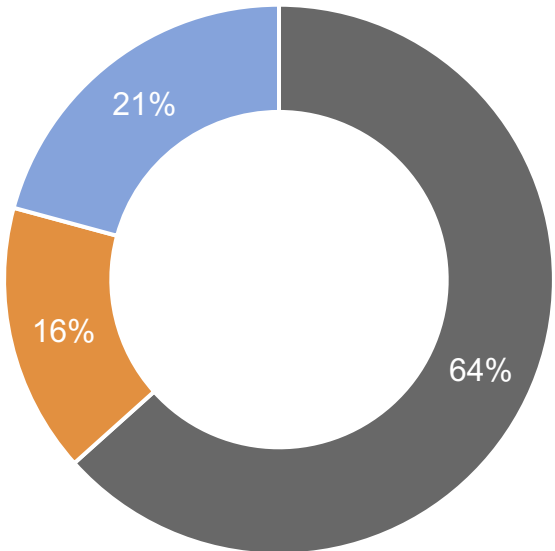**Should CO establish policies for governments and businesses to adopt EVs**

- 53% Yes
- 20% Unsure
- 27% No

■ Yes ■ Unsure ■ No

Should CO adopt Advanced Clean Trucks requirements

- 52% Yes
- 20% Unsure
- 27% No

■ Yes ■ Unsure ■ No

Should CO require high-mileage operations to reduce emissions

- 64% Yes
- 16% Unsure
- 21% No

■ Yes ■ Unsure ■ No

Q2: Should Colorado establish policies to encourage local governments and businesses to adopt electric vehicles for their operations? (N = 600)
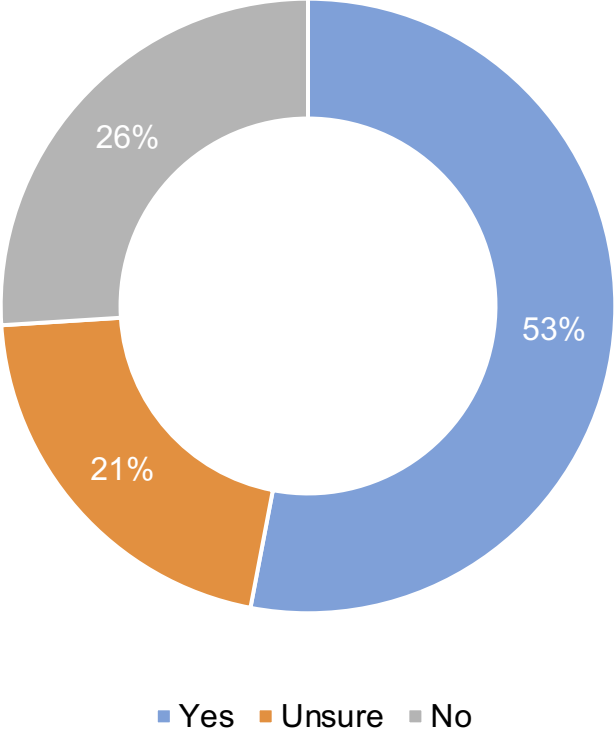
Q3: Some states have adopted the Advanced Clean Trucks rule, which requires auto manufacturers who sell medium- and heavy-duty vehicles (like vans, trucks, and buses) to sell zero-emissions vehicles as an increasing percentage of their annual sales from 2024 to 2035. Should Colorado adopt such requirements? (N = 600)

Q4: Should businesses that drive fleets of vehicles a high number of miles in Colorado be required to reduce the emissions from their operation over time? (N = 600)

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MORE THAN HALF OF COLORADO RESIDENTS SURVEYED SUPPORT ESTABLISHING A LOW CARBON FUEL STANDARD IN THE STATE; THIS IS ESPECIALLY TRUE OF DEMOCRATS (79%) AND THOSE IN URBAN AREAS (63%).

YouGov

Do you support establishing a low carbon fuel standard in Colorado?
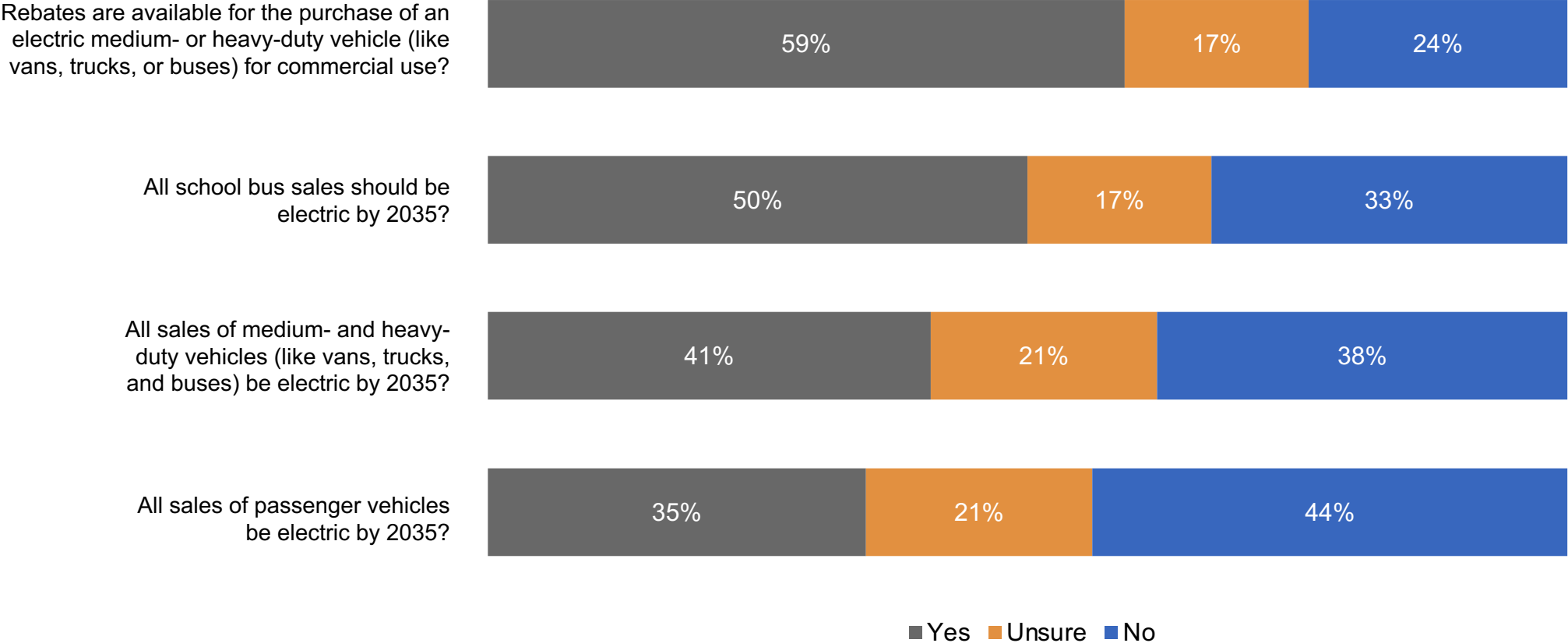

53%

26%

21%

■ Yes   ■ Unsure   ■ No

Q8: A low carbon fuel standard is a policy to reduce the amount of carbon in transportation fuels and thus carbon emissions over time. Providers of fuels can generate credits or deficits based on the fuels they sell which can generate revenue for related incentive programs. Do you support establishing a low carbon fuel standard in Colorado? (N = 600)

Nearly 6 in 10 Colorado residents surveyed support rebate programs for electric medium- and heavy-duty vehicles, while half support all school bus sales being electric by 2035.
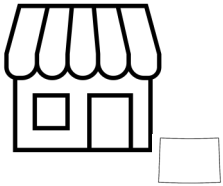
Do you support legislation establishing that…

Question	Yes	Unsure	No
Rebates are available for the purchase of an electric medium- or heavy-duty vehicle (like vans, trucks, or buses) for commercial use?	59%	17%	24%
All school bus sales should be electric by 2035?	50%	17%	33%
All sales of medium- and heavy-duty vehicles (like vans, trucks, and buses) be electric by 2035?	41%	21%	38%
All sales of passenger vehicles be electric by 2035?	35%	21%	44%

■ Yes   ■ Unsure   ■ No

Q5: Do you support legislation establishing that... (N = 600)

Only a minority of Colorado respondents are more or less likely to support rebate programs based on specific limitations to the programs. Half of Colorado respondents are unaffected by any possible limitations on rebate programs.

YouGov

Would the following limitations make you more or less likely to support such legislation? (TOP 3 More Likely)

35% More Likely Rebates must include a scrappage requirement (a trade in of a more polluting version of the vehicle).

28% More Likely Rebates are only eligible for businesses located in Colorado.
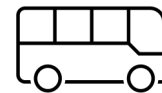
27% More Likely Rebates are only eligible for vehicles that drive a large number of miles in Colorado.
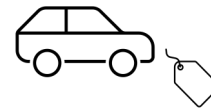
Would the following limitations make you more or less likely to support such legislation? (BOTTOM 3 Less Likely)

31% Less Likely Rebates are only eligible for small businesses under a certain size.

29% Less Likely Rebates are only eligible for a certain type of vehicle, such as a bus, van or truck.
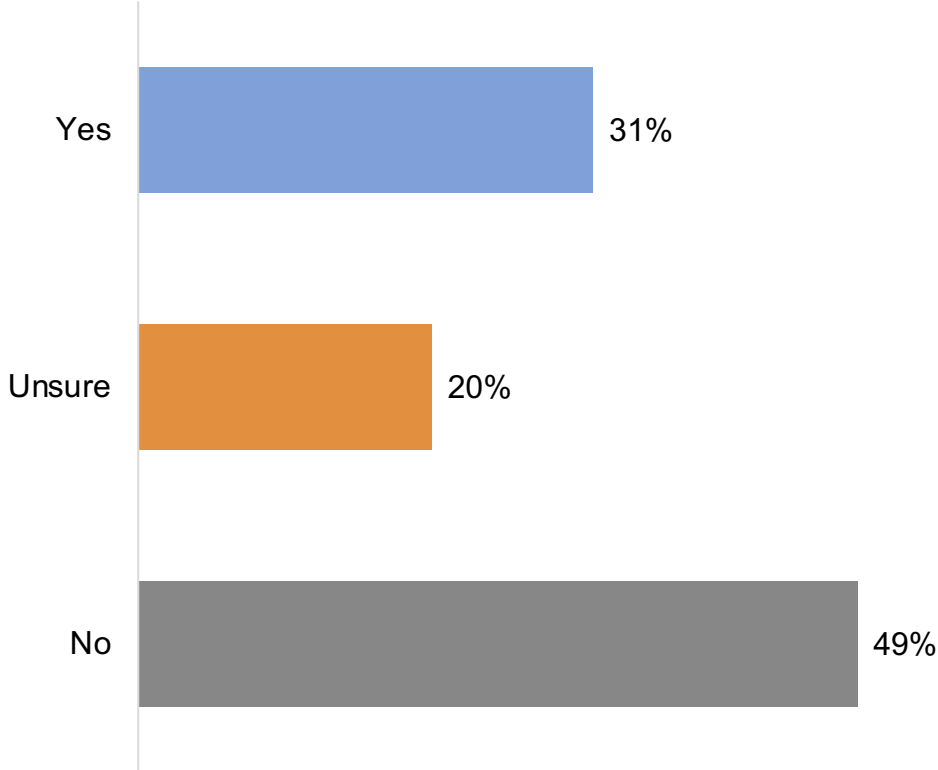
28% Less Likely Rebates are only available for vehicles under a certain price.

28% Less Likely Rebates are only available for vehicles that drive through areas with significant air pollution.

Q6: Would the following limitations make you more or less likely to support rebate legislation? (N = 600)

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NEARLY HALF OF COLORADO RESIDENTS SURVEYED OPPOSE A CUSTOMER-FUNDED INCENTIVE PROGRAM FOR BUSINESSES TO PURCHASE EVS THAT IS FUNDED BY A SURCHARGE ON ALL CUSTOMER ELECTRIC BILLS; THIS IS ESPECIALLY TRUE OF REPUBLICANS (66%) AND THOSE IN RURAL AREAS (60%).

Do you support an incentive program for businesses to purchase electric medium- and heavy-duty vehicles paid for by a surcharge on all customer electric bills?
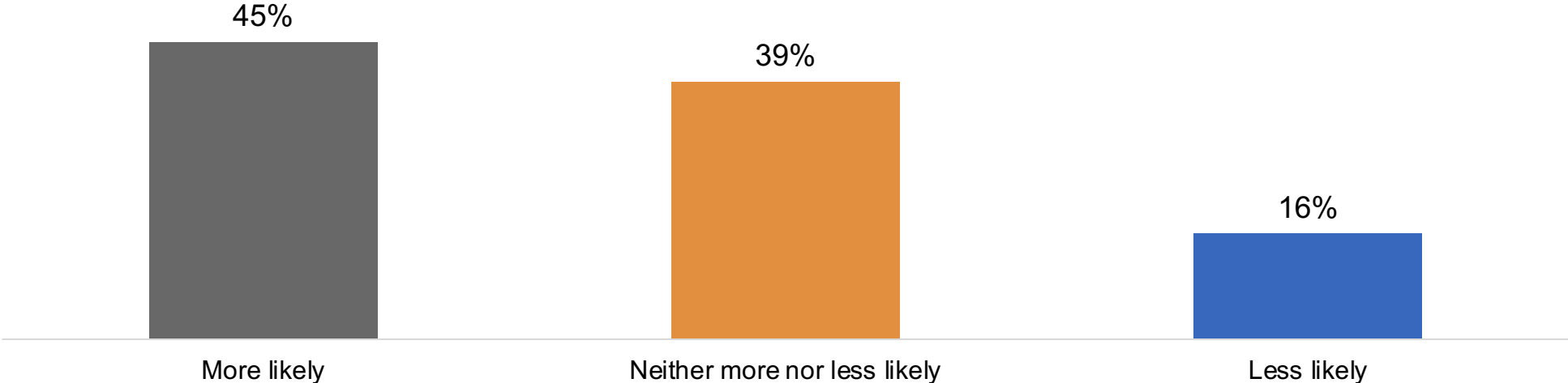

Yes — 31%
Unsure — 20%
No — 49%

Q7: Do you support an incentive program for businesses to purchase electric medium- and heavy-duty vehicles? This would be paid for by a surcharge on all customer electric bills. (N = 600)

Sources of funding for implementing EVs across Colorado

OVERALL, COLORADO RESIDENTS SURVEYED WOULD SPEND ~1/4 OF AVAILABLE PUBLIC FUNDS ON EV CHARGING STATIONS; ANOTHER 1/4 WOULD SUPPORT RETURNING PUBLIC FUNDS TO THE STATE FOR OTHER PROGRAMS.

YouGov

How much money would you spend on each of the following programs (mean allocation out of $1000)?

$239	$215	$195	$179	$173
Public electric vehicle charging stations	Return this money to the state	Rebate for passenger electric vehicles	Rebate for medium- and heavy-duty vehicles	Residential electric vehicle charging equipment rebates

Q8: Please imagine that you are helping to allocate $1,000 of public funds to be spent on clean transportation. How much money would you spend on each of the following programs? (N = 595)

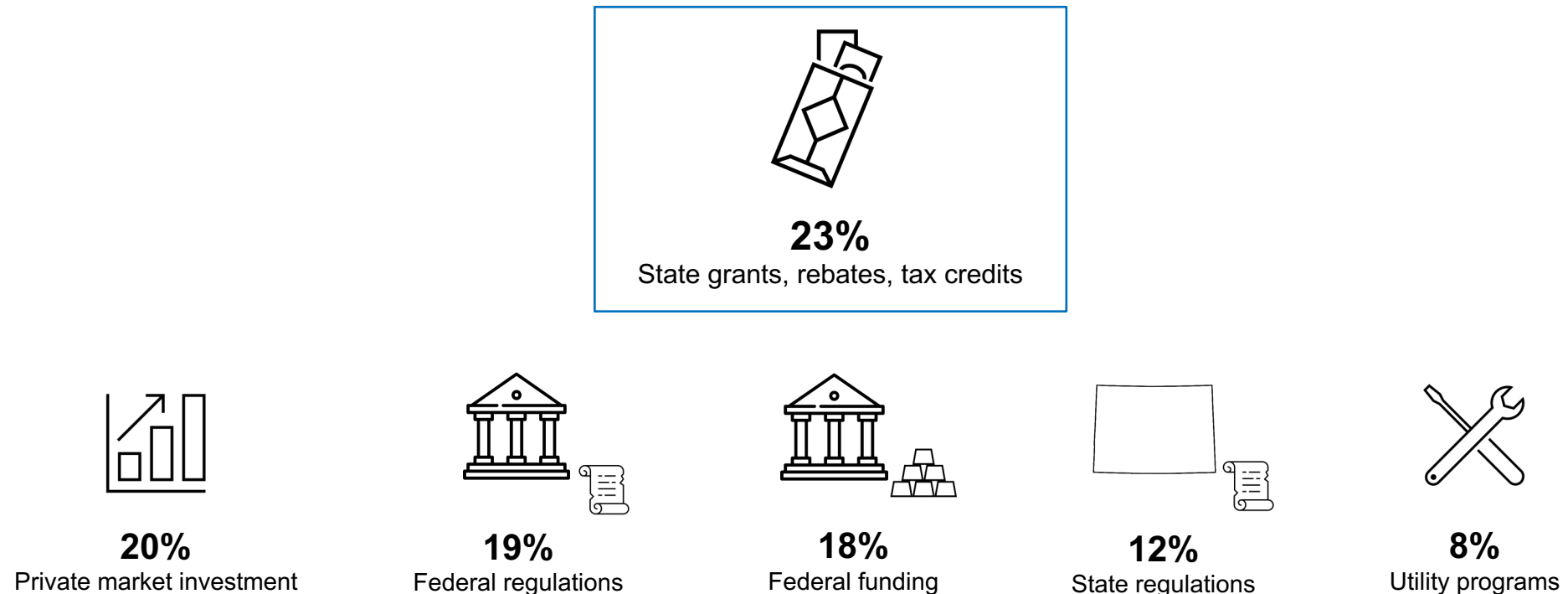# NEARLY 1/4 OF COLORADO RESIDENTS SURVEYED FEEL THAT STATE GRANTS AND CREDITS WOULD BE THE MOST EFFECTIVE TOOL TO REPLACE GAS VEHICLES WITH ELECTRIC VERSIONS; THIS IS ESPECIALLY TRUE OF DEMOCRATS (26%).

What is the most effective tool to replace aging diesel with electric? (% who ranked each item as most effective)

23%
State grants, rebates, tax credits

20%
Private market investment

19%
Federal regulations

18%
Federal funding

12%
State regulations

8%
Utility programs

Q11: Please rank the tools you think are most effective to replace aging diesel medium- and heavy-duty vehicles with electric alternatives, with 1 being most effective and 6 being least effective. (N= 599, "Private market investment" N = 600)

MORE THAN HALF OF COLORADO RESIDENTS SURVEYED THINK SENATE BILL 260 FUNDING SHOULD BE USED FOR EV CHARGING INFRASTRUCTURE ACROSS THE STATE; THIS IS ESPECIALLY TRUE OF DEMOCRATS (73%) AND THOSE IN URBAN AREAS (62%).

Should funding from Senate Bill 260 be used for EV charging infrastructure?

Yes	Unsure	No
54%	25%	21%

Q14: Do you think funding from Senate Bill 260 should be used for EV charging infrastructure for electrifying buses, ride-sharing vehicles, and delivery trucks? (N= 600)

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NEARLY HALF OF COLORADO RESIDENTS SURVEYED THINK THAT FEES FROM RETAIL DELIVERIES AND RIDE-SHARING SHOULD BE USED TO HELP REPLACE HIGH-POLLUTING COMMERCIAL VEHICLES WITH EVS; THIS IS ESPECIALLY TRUE OF DEMOCRATS (64%) AND THOSE IN URBAN AREAS (59%).

Should retail delivery / ride-sharing fees help replace high-polluting vehicles with EVs?

Q15: Should the fees assessed for retail deliveries and ride-sharing rides (such as Uber and Lyft) help fund replacing more high-polluting delivery trucks, buses, and school buses with cleaner versions? (N= 600)

Other attitudes and concerns regarding electrification

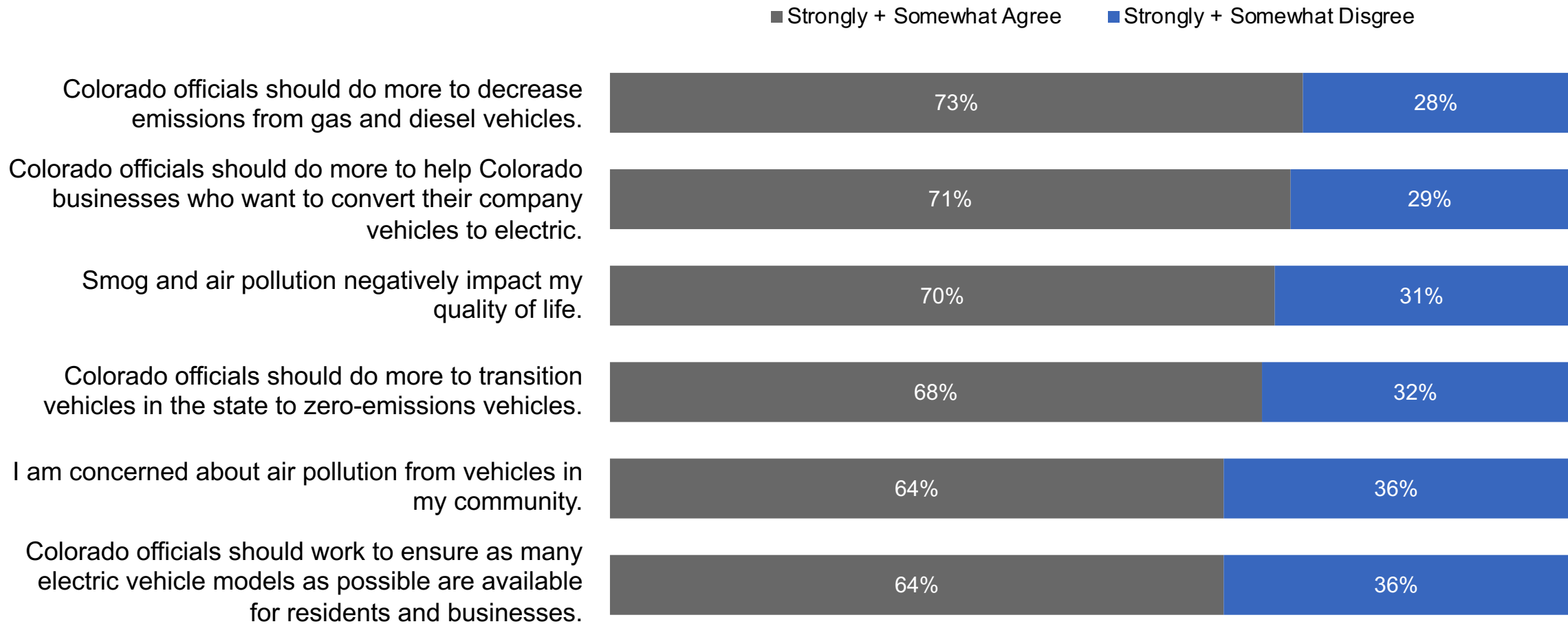# A MAJORITY OF COLORADO RESIDENTS SURVEYED ARE GENERALLY CONCERNED ABOUT POLLUTION AND SMOG ISSUES, AND FEEL THAT STATE OFFICIALS SHOULD BE DOING MORE TO DECREASE EMISSIONS.

YouGov

■ Strongly + Somewhat Agree ■ Strongly + Somewhat Disgree

Statement	Strongly + Somewhat Agree	Strongly + Somewhat Disagree
Colorado officials should do more to decrease emissions from gas and diesel vehicles.	73%	28%
Colorado officials should do more to help Colorado businesses who want to convert their company vehicles to electric.	71%	29%
Smog and air pollution negatively impact my quality of life.	70%	31%
Colorado officials should do more to transition vehicles in the state to zero-emissions vehicles.	68%	32%
I am concerned about air pollution from vehicles in my community.	64%	36%
Colorado officials should work to ensure as many electric vehicle models as possible are available for residents and businesses.	64%	36%

Q1: How much do you agree or disagree with the following statements? (N = 599)

NEARLY 1/3 OF COLORADO RESIDENTS WORK AT BUSINESSES THAT OWN AND OPERATE VEHICLES. MORE THAN HALF THINK THAT THEIR EMPLOYERS ARE LIKELY TO PURCHASE EVS FOR THEIR BUSINESSES WITHIN THE NEXT 10 YEARS; THIS IS ESPECIALLY TRUE OF THOSE IN URBAN AREAS (70%).
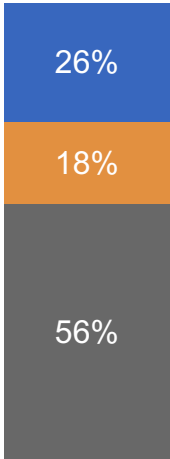
YouGov

29% of Colorado residents surveyed are employed by a business that owns and operates vehicles

How likely is your employer to purchase electric vehicles for its operations in the next ten years?
(Among those with an employer that owns and operates vehicles)

■ Very + somewhat likely   ■ Unsure   ■ Very + somewhat unlikely
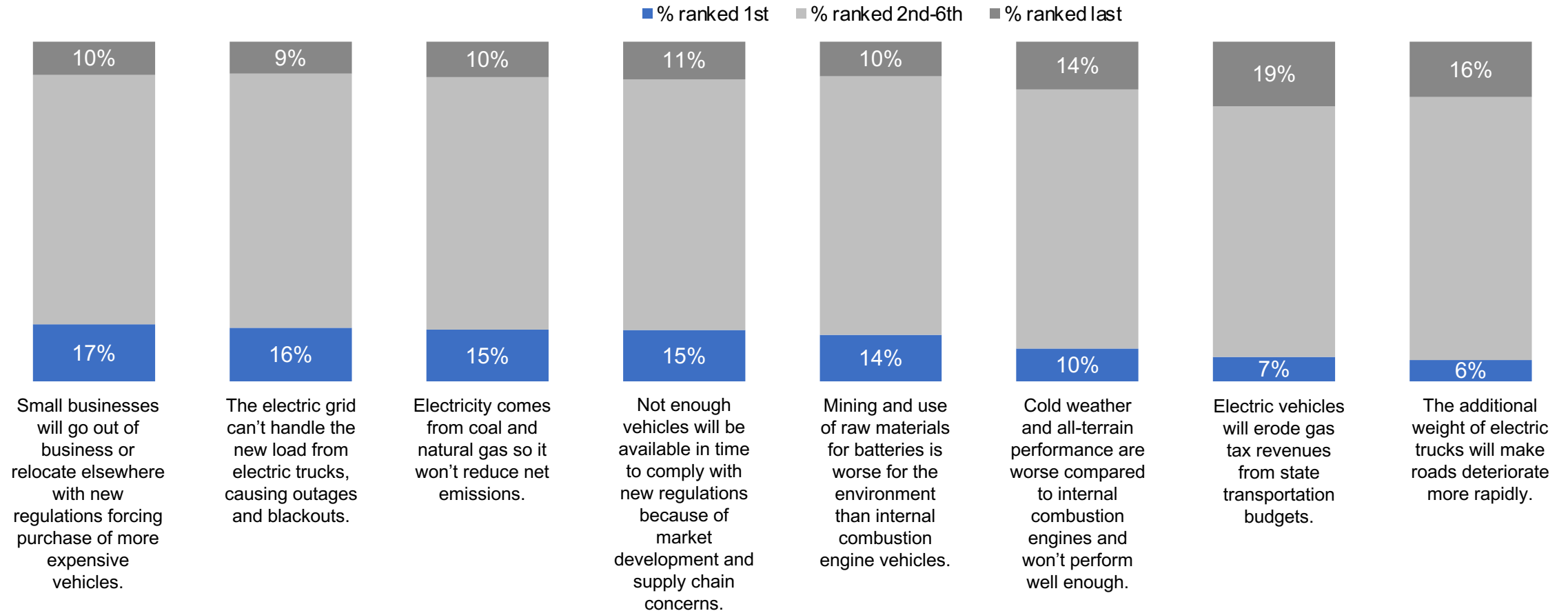
26%

18%

56%

Q12: Are you employed by a business that owns and operates vehicles? (N= 600)
Q13: How likely is your employer to purchase electric vehicles for its operations in the next ten years? (N = 166)

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COLORADO RESIDENTS SURVEYED FEEL THAT SMALL BUSINESS IMPACTS AND THE ELECTRIC GRID'S LOAD CAPACITY ARE THE STRONGEST ARGUMENTS AGAINST MEDIUM- AND HEAVY-DUTY VEHICLE ELECTRIFICATION.

Arguments against medium- and heavy-duty vehicle electrification, by effectiveness

■ % ranked 1st   ■ % ranked 2nd-6th   ■ % ranked last

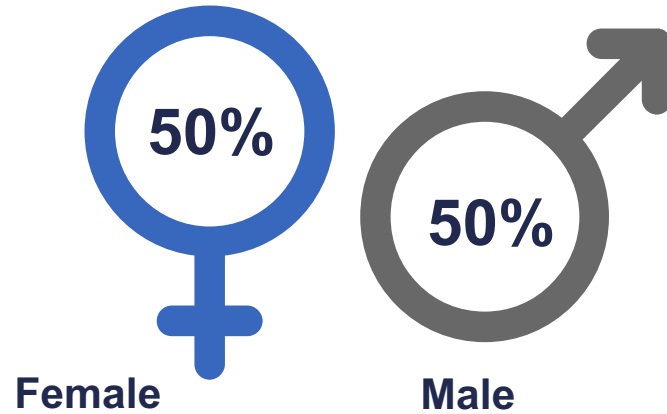| Argument	% ranked last	% ranked 1st
Small businesses will go out of business or relocate elsewhere with new regulations forcing purchase of more expensive vehicles.	10%	17%
The electric grid can't handle the new load from electric trucks, causing outages and blackouts.	9%	16%
Electricity comes from coal and natural gas so it won't reduce net emissions.	10%	15%
Not enough vehicles will be available in time to comply with new regulations because of market development and supply chain concerns.	11%	15%
Mining and use of raw materials for batteries is worse for the environment than internal combustion engine vehicles.	10%	14%
Cold weather and all-terrain performance are worse compared to internal combustion engines and won't perform well enough.	14%	10%
Electric vehicles will erode gas tax revenues from state transportation budgets.	19%	7%
The additional weight of electric trucks will make roads deteriorate more rapidly.	16%	6%

Q16: Please rank the following arguments against medium- and heavy-duty vehicle electrification by their effectiveness, with 1 being most effective and 8 being least effective. (N= 600)
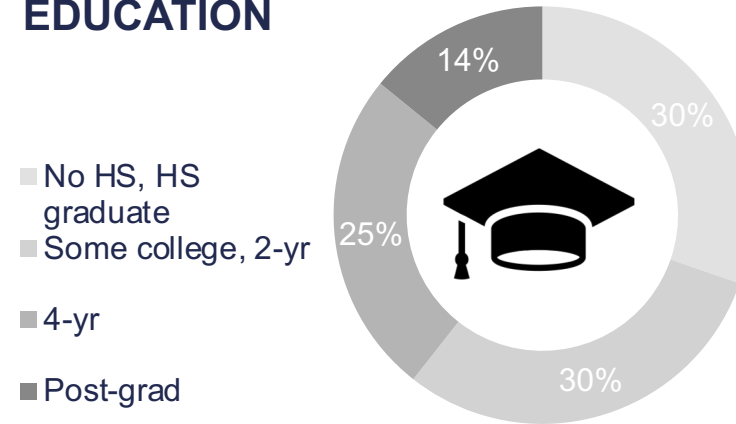
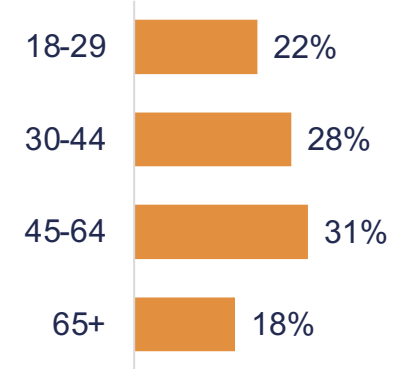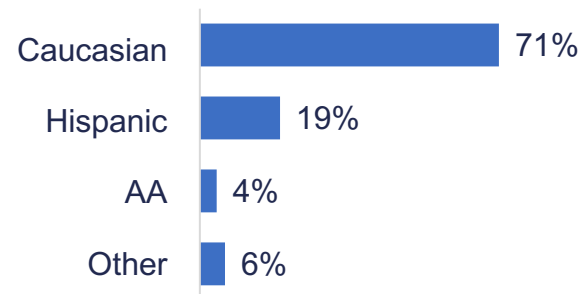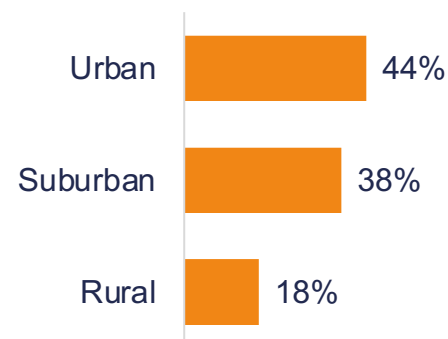# Demographics

Demographics of Colorado Survey

GENDER

50% Female

50% Male

EDUCATION

- No HS, HS graduate — 30%
- Some college, 2-yr — 30%
- 4-yr — 25%
- Post-grad — 14%

AGE

18-29	22%
30-44	28%
45-64	31%
65+	18%

ETHNICITY

Caucasian	71%
Hispanic	19%
AA	4%
Other	6%

RESIDENCE TYPE

Urban	44%
Suburban	38%
Rural	18%

PARTY ID

Democrat	36%
Republican	27%
Independent	30%
Other/Not Sure	7%

General demographics questions
Base: Total CO respondents, n=600