Clean Fuels Ohio

Consumer Research
Alternative Fuel Technologies
Initial Topline Summary Report

05.15.12

columbus/detroit/toledo

COMMUNICĀ

Background

- *Communica was hired to assist with brand development and the overall marketing plan for Clean Fuel sOhio.*
- *Clean Fuels Ohio provided Communica several studies and industry reports summarizing a considerable body of research. These studies helped to shape our primary research efforts. Where appropriate benchmarks are highlighted from a study conduct by Deloitte, 2010 Gaining traction – A customer view of electric vehicle mass adoption in the U.S. Market 2010.*

Project Objectives

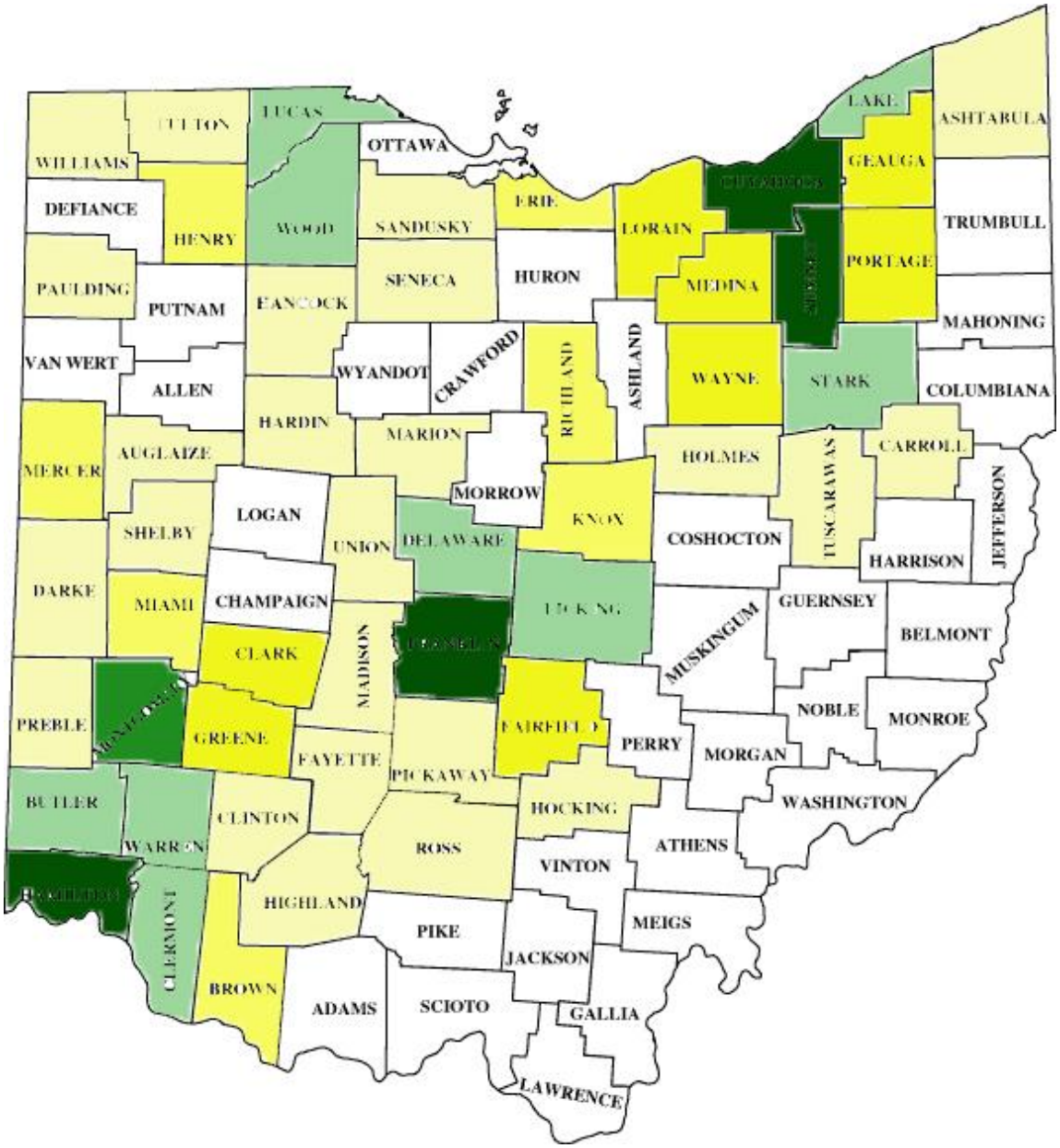
- *Awareness of alternate fuel technology options*
- *Identify interest and the likelihood of consideration for next vehicle purchase*
- *Key factors and potential barriers in selection process*
- *Test key messages to identify potential motivators, i.e. energy independence, environmental concerns, job creation, political action, price sensitivity*
- *Identify / validate or invalidate previous studies about key audience elements*

Methodology, Sample & Analysis

- Quantitative web-based in-depth survey
- Target audience criteria:
  - Ohio resident
  - 400 complete from metro markets, 100 complete from rural
  - Registered voter
  - Age 25+
  - 67% of the sample with HHLD Income >$50,000
  - Education: 67% of sample has a college degree or higher
- Data was cross tabulated to identify statistically significant differences across demographic criteria

Sample

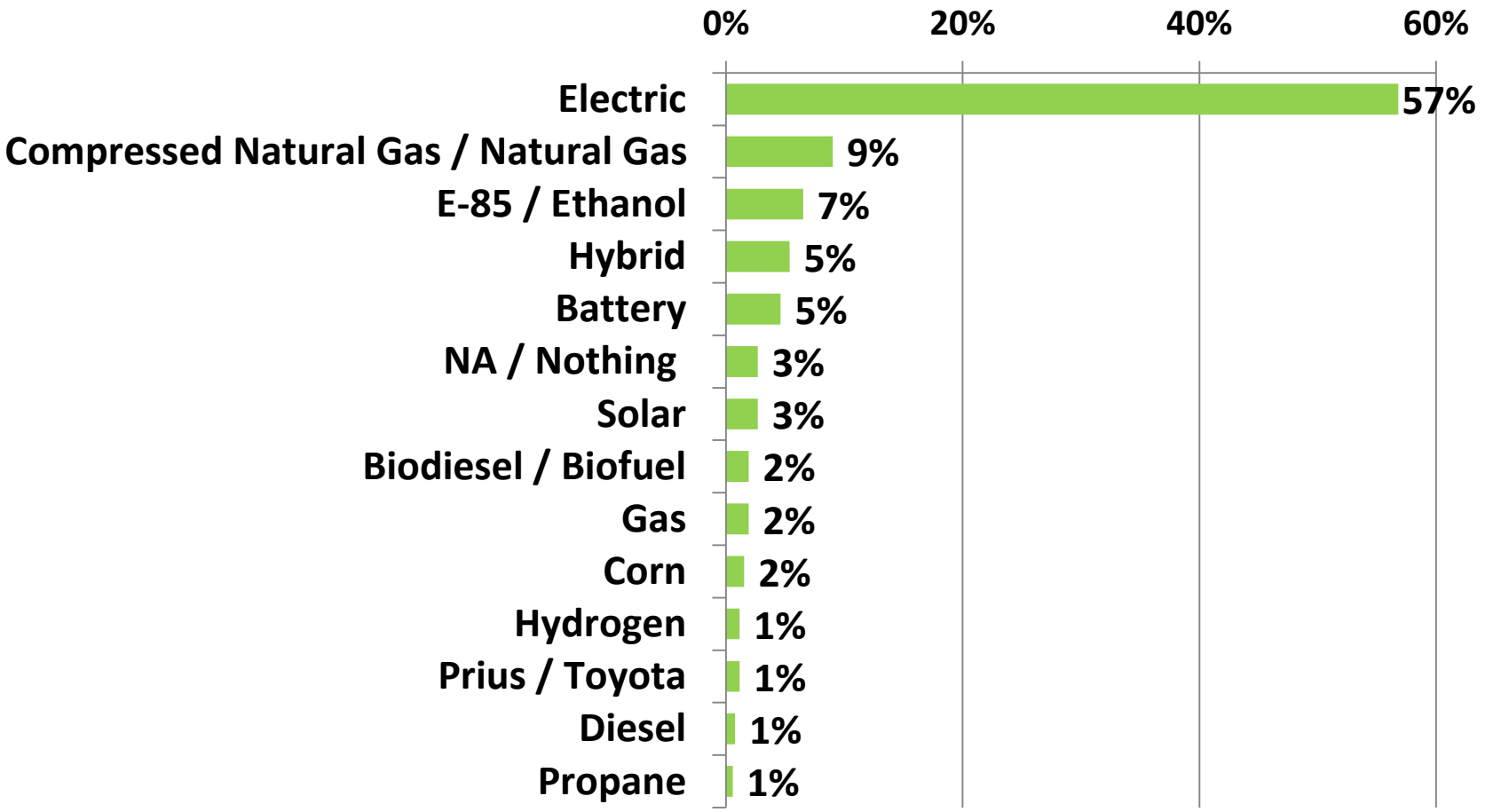
- 521 completes
  - 419 metro / suburb
  - 102 rural
- Concentrated around Columbus, Cincinnati, and Cleveland



Awareness & Familiarity

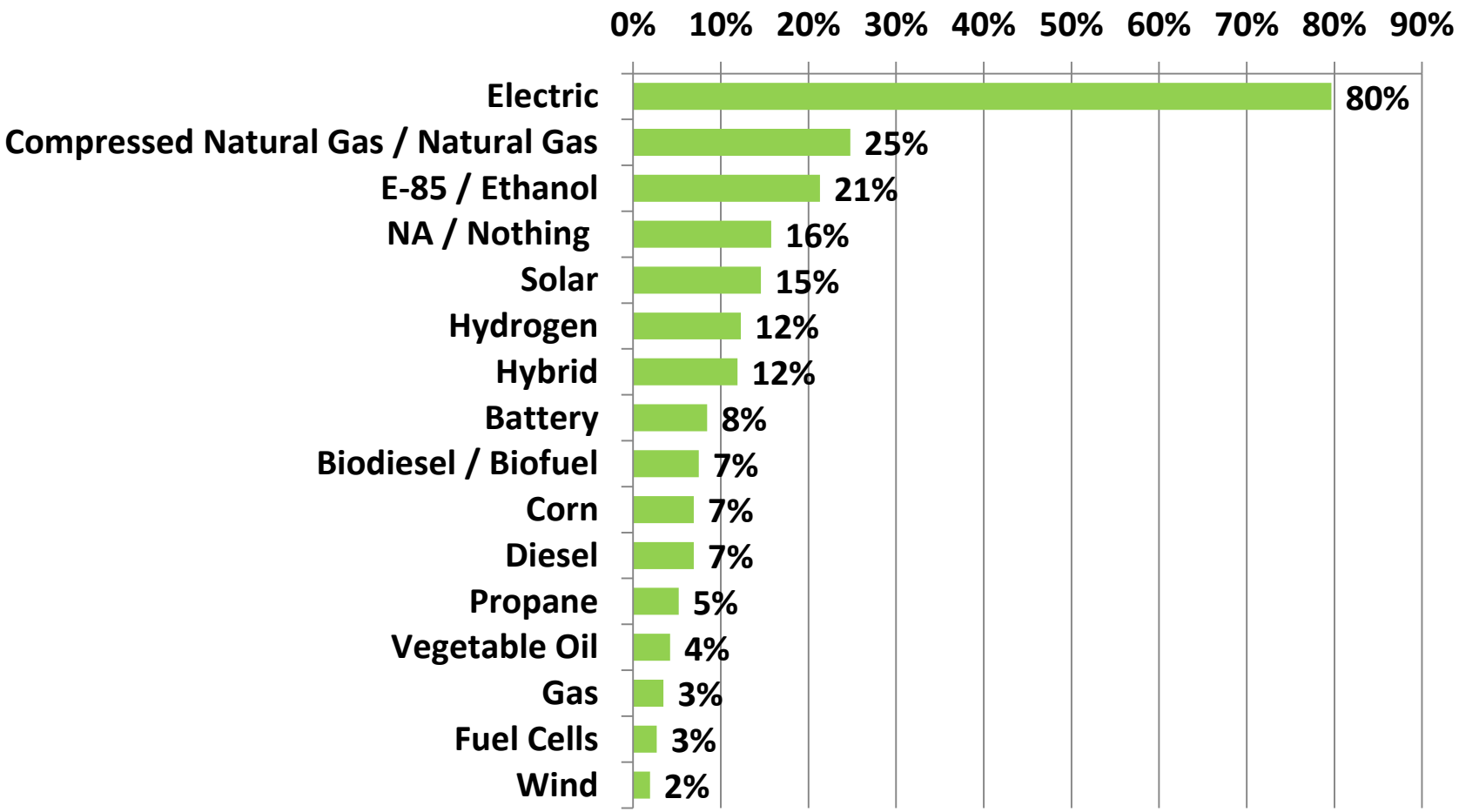
Top Of Mind Awareness

When you think of alternative fuel options for vehicles which is the first option that comes to mind?



Total Unaided Awareness

Please list the names of any other alternative fuel options for vehicles that come to mind.

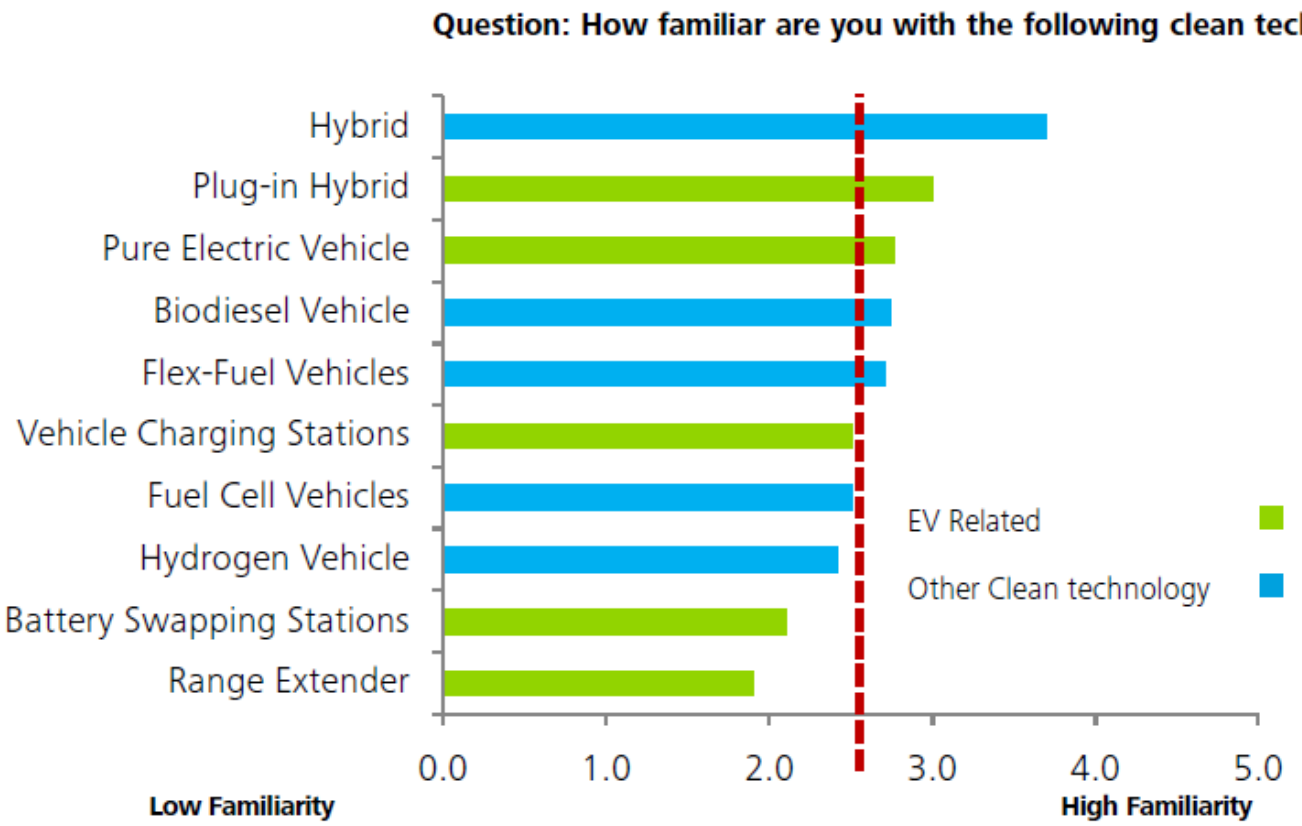


Familiarity

How familiar are you with each of the following technologies?

Figure 9. Customer Surveyed Familiarity

Deloitte, 2010 Gaining traction – A customer view of electric vehicle mass adoption in the U.S. Market 2010



Familiarity

How familiar are you with each of the following technologies?

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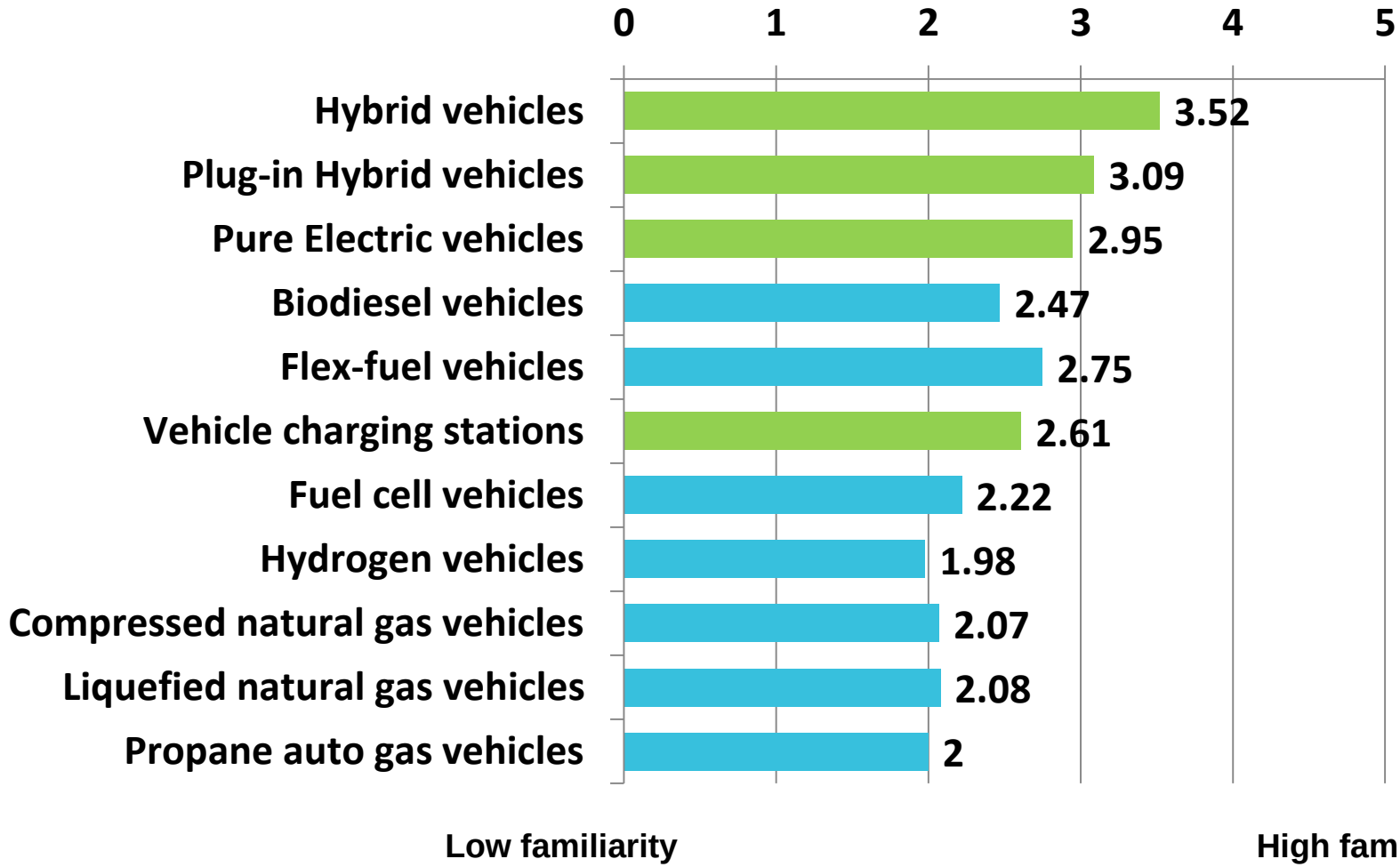

Interest & Consideration

Interest

What is your level of interest in learning more about the following technologies?

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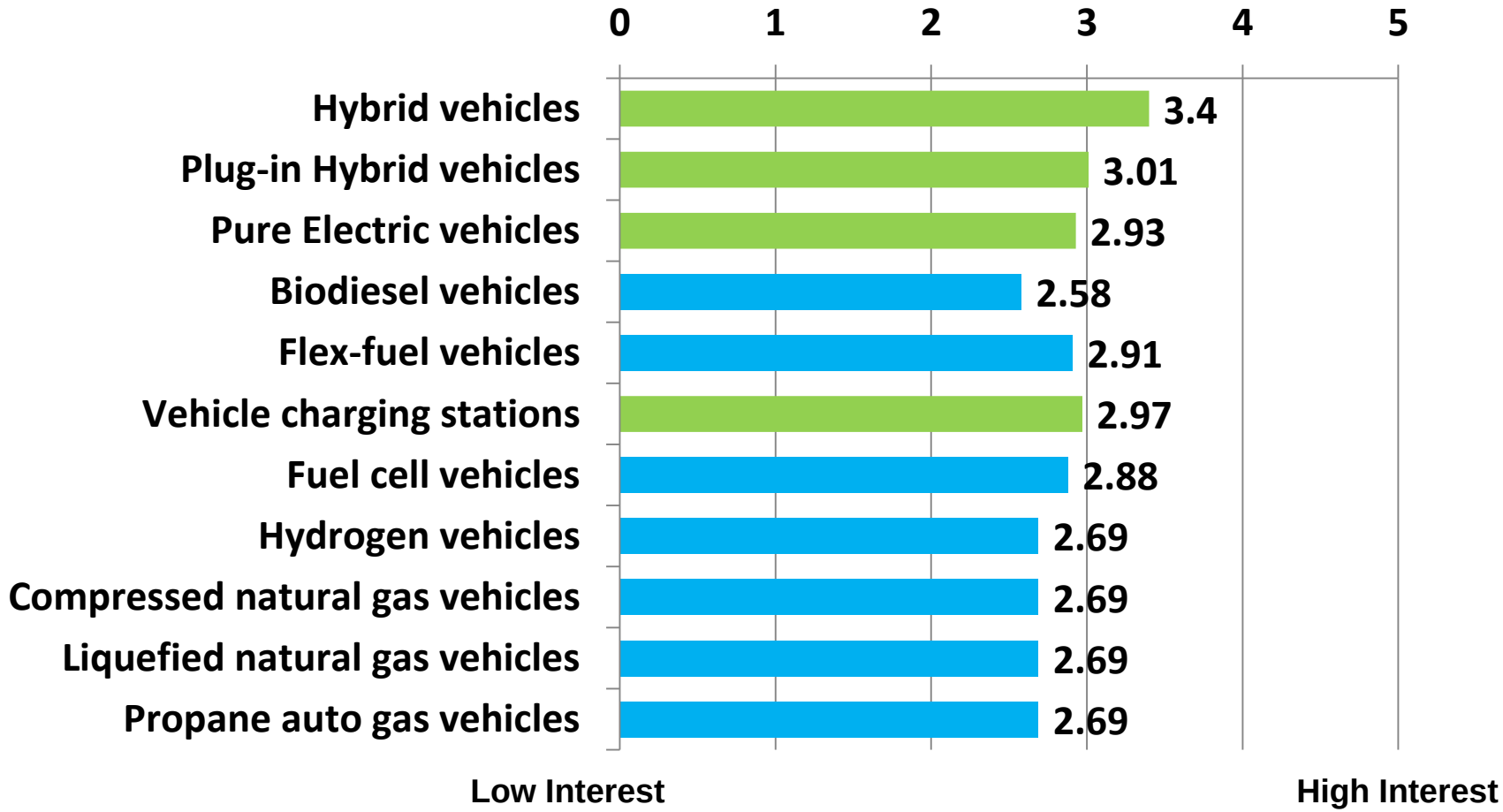

Likelihood to Consider

What is the likelihood you would consider each of the following technologies for your next vehicle purchase?

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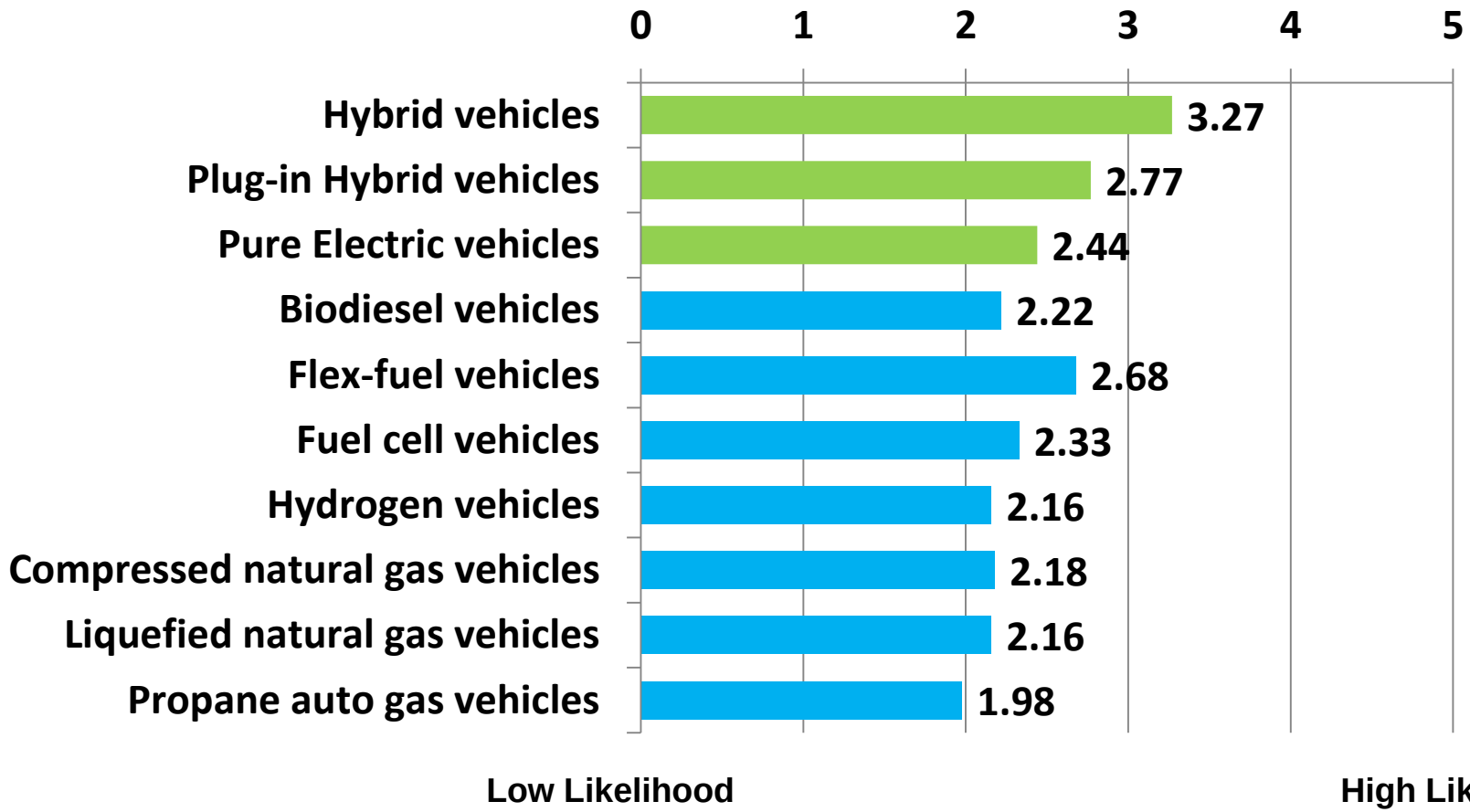

Definitions Provided.

Pure Electric Vehicle: A battery-operated electric vehicle powered by electricity stored in batteries that are recharged

Hybrid Vehicle: A vehicle that can run on just the engine, just the batteries, or a combination of both. The vehicle has an on-board rechargeable energy storage system (RESS) and a fuel based power source for vehicle propulsion. The batteries are recharged by capturing kinetic energy generated through braking. Some hybrids use the combustion engine to generate electricity by spinning a generator to either recharge the battery or directly feed power to an electric motor that drives the vehicle.

PHEV (plug-in hybrid electric vehicle): A hybrid electric vehicle has batteries that are recharged by plugging into an electric power source. An electric motor then drives the vehicle with electricity stored in rechargeable batteries with the option to recharge with electricity or with an onboard gasoline-powered generator.

Extended Range Electric Vehicle: Similar to the PHEV, this vehicle runs on a battery that is charged by plugging it in. The car runs entirely on the battery for a range of miles. After the battery is completely discharged it switches to a gasoline powered engine until the battery is recharged.

Likelihood to Consider After Definitions

What is the likelihood you would consider each of the following technologies for your next vehicle purchase?

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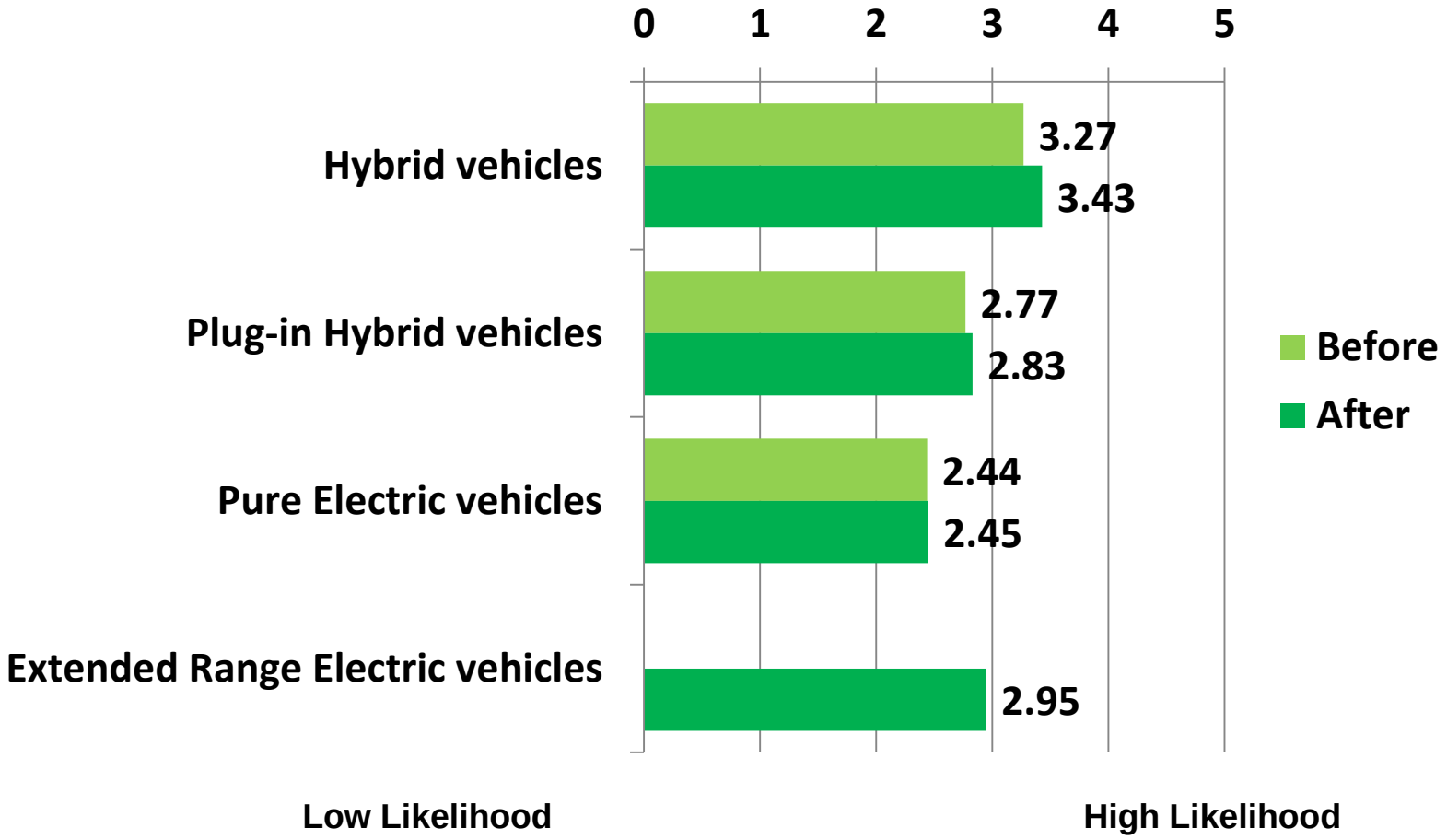

Decision Criteria & Barriers

Decision Criteria if Selection Electric Vehicle

Please rate the importance of each of the following criteria if you were purchasing an Electric Vehicle.

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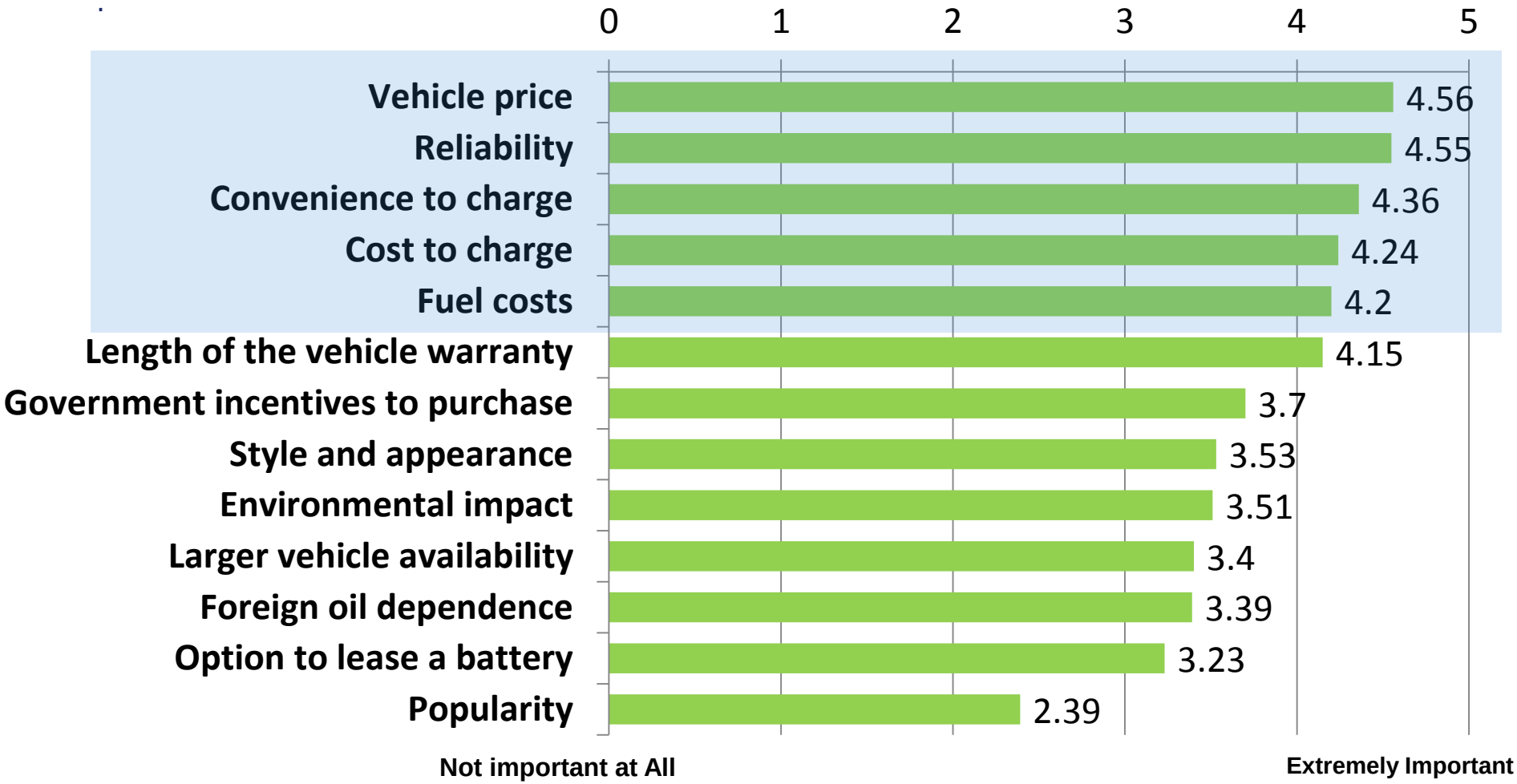

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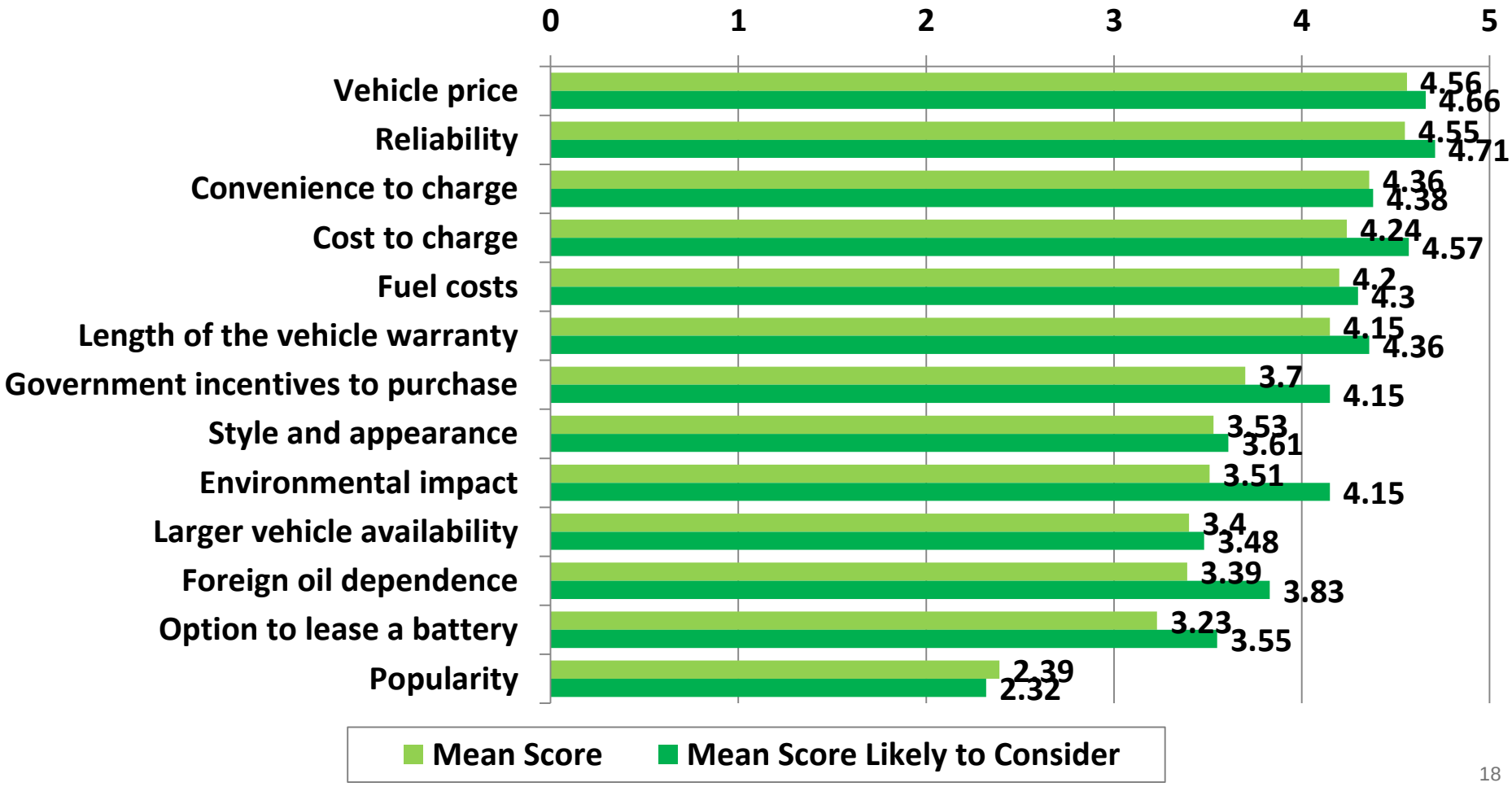

Ranking of Cost Decision Criteria

Please rank the importance of each of the following cost items you evaluate when you purchase a vehicle. Number 1 is the most important and number 5 is the least important.

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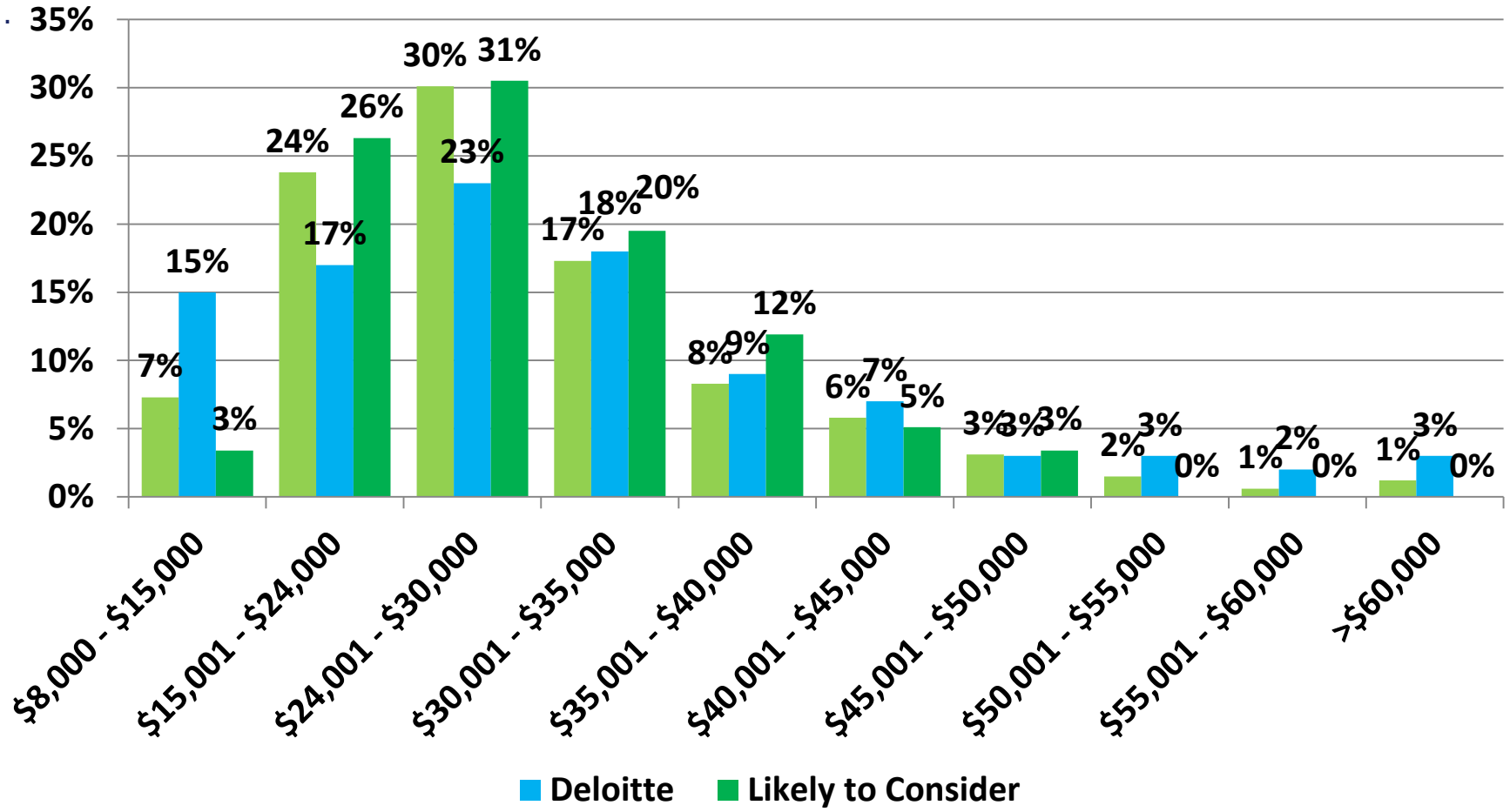
Rank Item	Rank	Points
Vehicle purchase price	1	2517
Maintenance and repair	2	1887
Fuel cost	3	1796
License & registration	4	859
Parking	5	756

Cost Expectations for PEV

How much would you expect to pay for an electric vehicle?



Barriers

What would be the top factor that would prevent you from purchasing an electric vehicle? .

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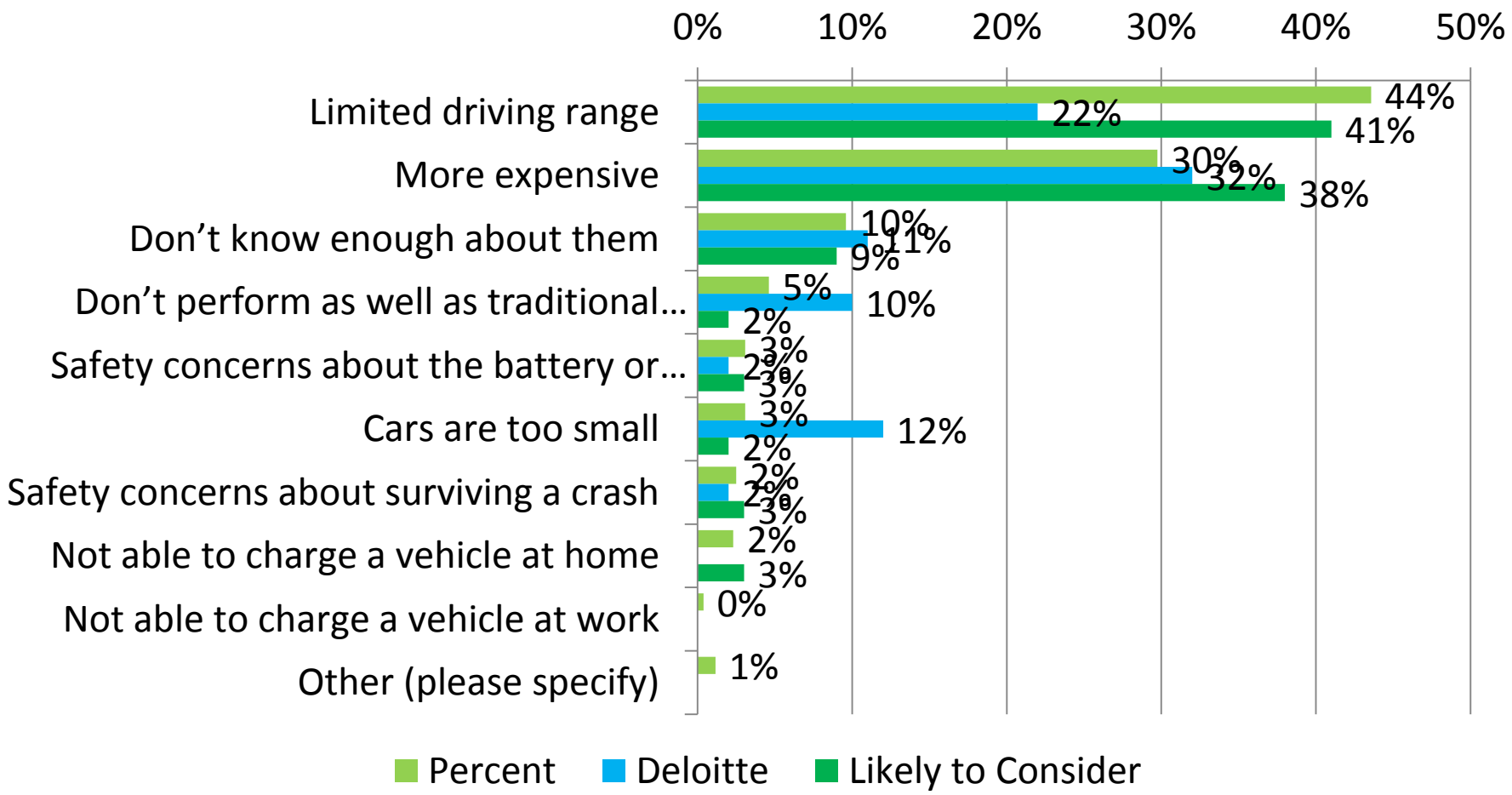

Average Driving Mileage & PEV Expectations

Approximately how many miles do you drive each weekday? Weekend?
How many miles would you expect an electric vehicle to drive on a single charge before you would consider purchasing one?

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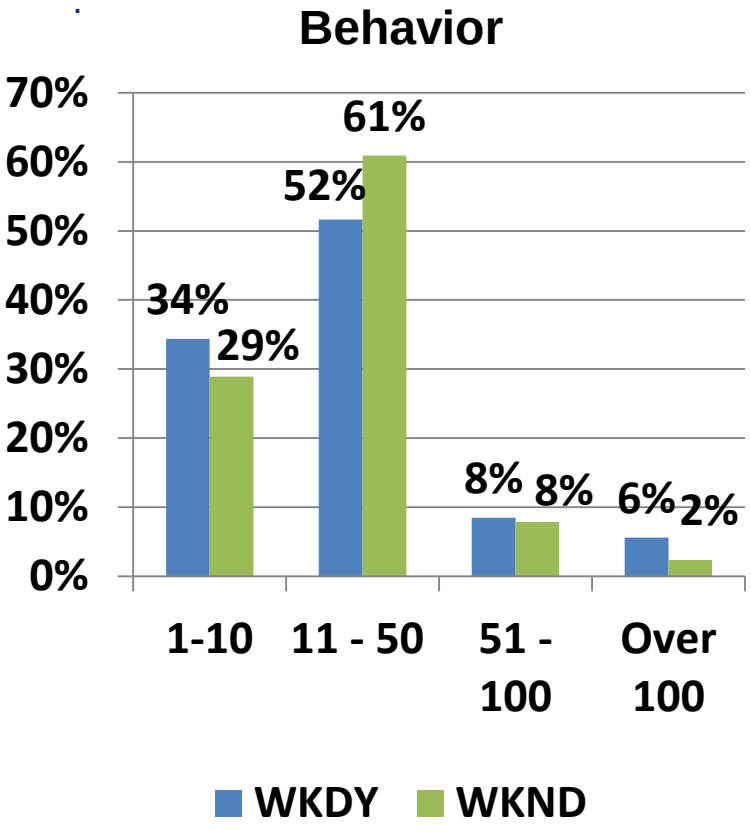

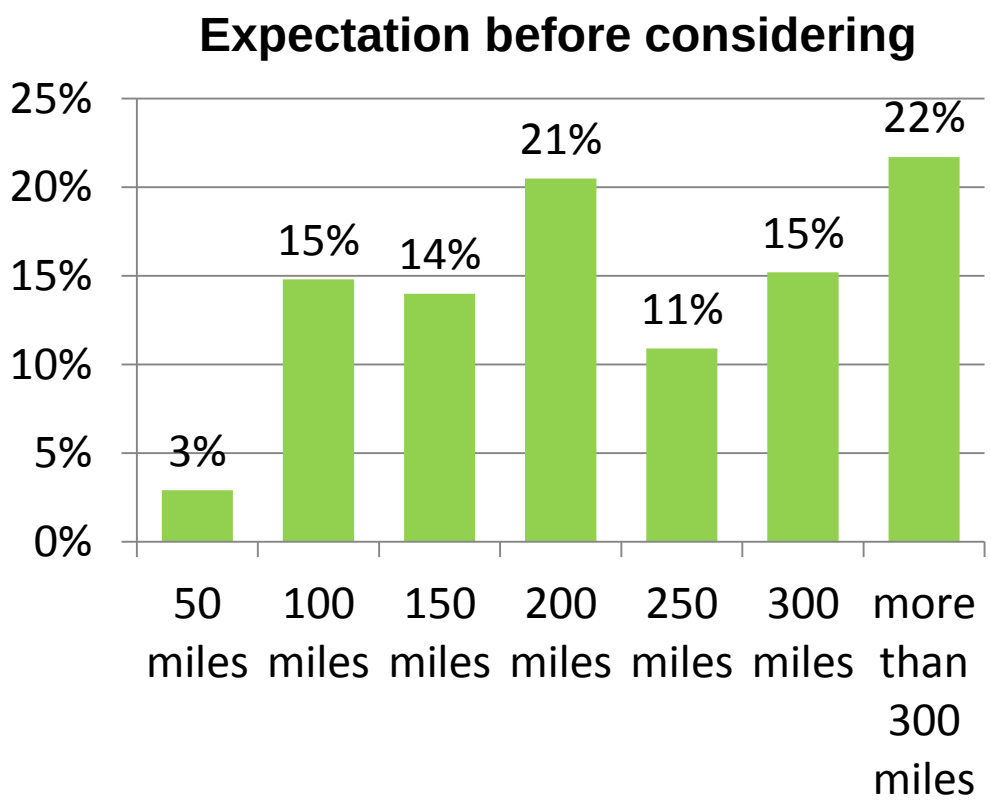

Charging Preference & Home Availability

Which charging option would you prefer if you owned an electric vehicle?
Do you park your car in an area where you would have access to an electrical power outlet?

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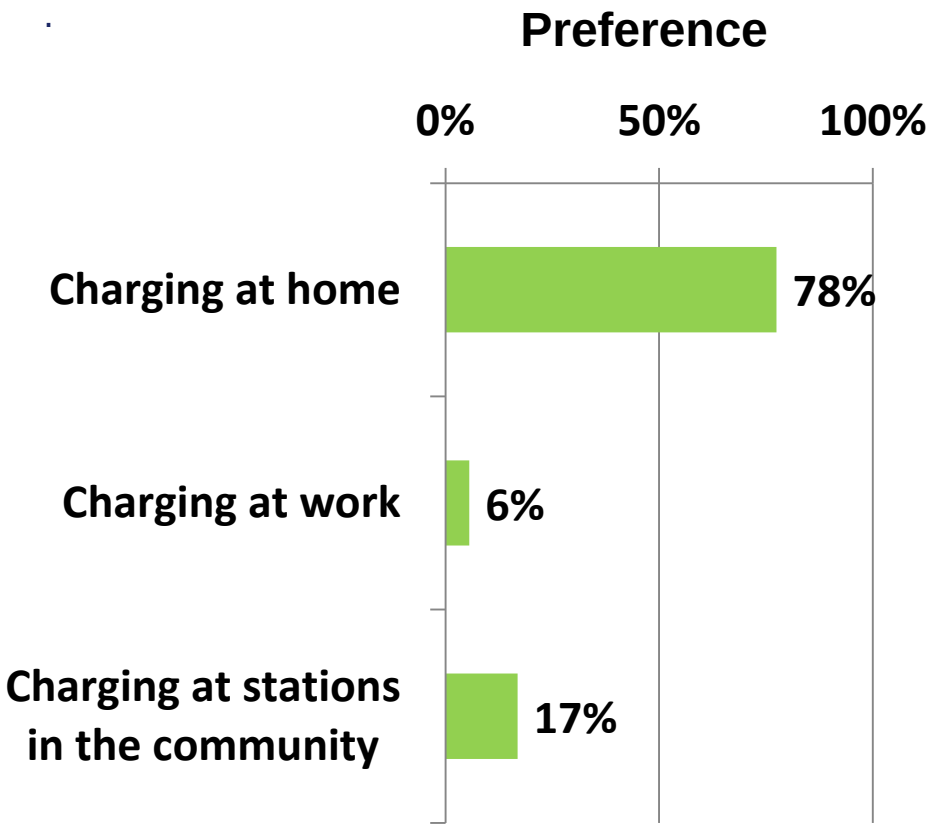

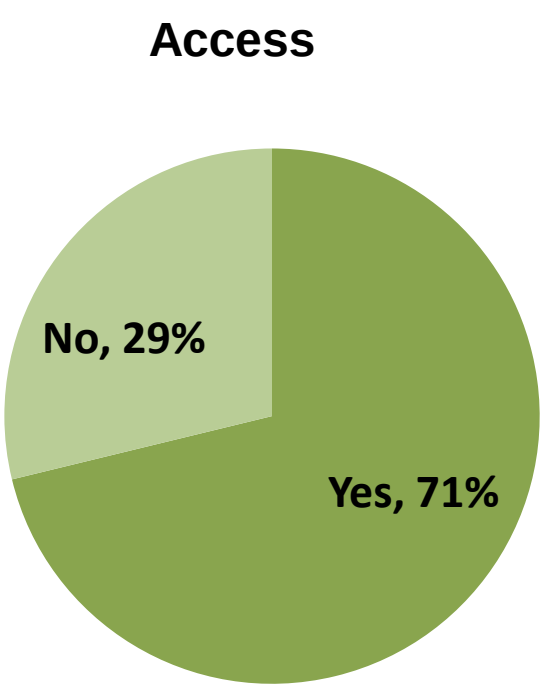

Motivators & Message

Early Adoption & Thought Leadership

Please rate your level of agreement with each of the following statements

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	Bottom 2 box	Neutral	Top 2 Box
My friends often ask my advice	19%	35%	46%
Among my friends I am usually the first to try a new technology	51%	33%	17%
I sometimes pay more for an innovative product or service	29%	31%	40%
I am willing to pay more for convenience	15%	30%	55%

Potential Motivators

Please rate your level of agreement with each of the following statements

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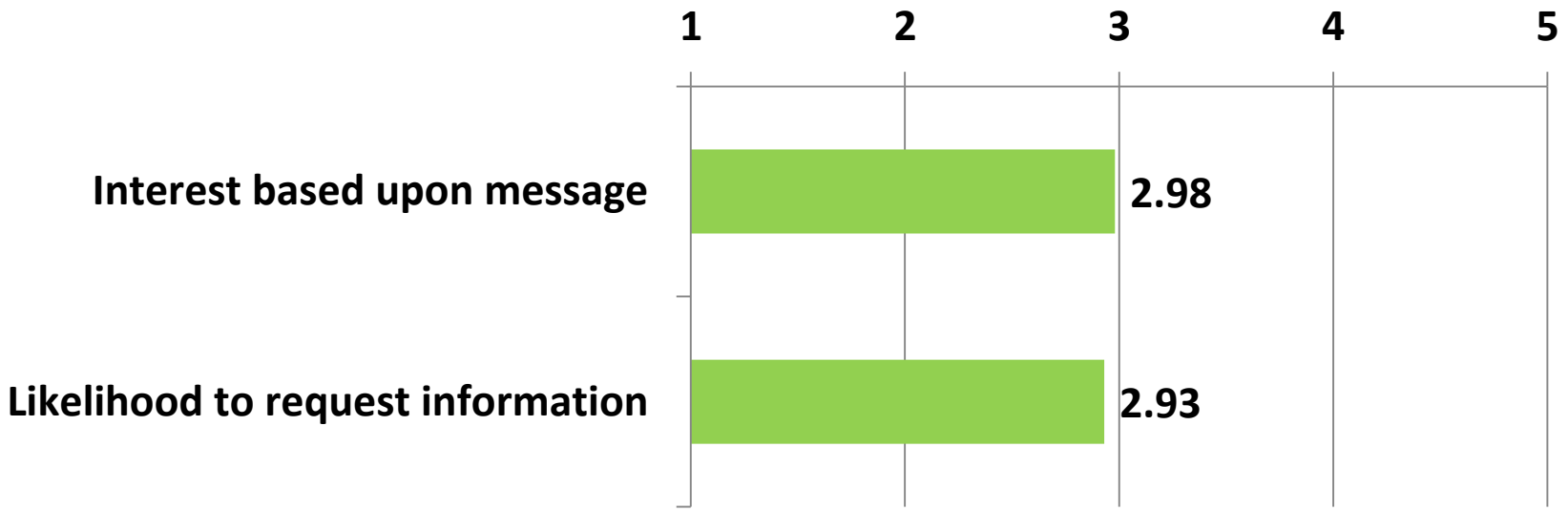
	Bottom 2 box	Neutral	Top 2 Box
I want to reduce my dependence on foreign oil	2%	18%	80%
I am concerned about the environment	5%	22%	73%
Increasing the use of alternative fuels will lead to long term job creation in Ohio	14%	40%	46%
I am politically active on issues and causes I care about	24%	39%	37%

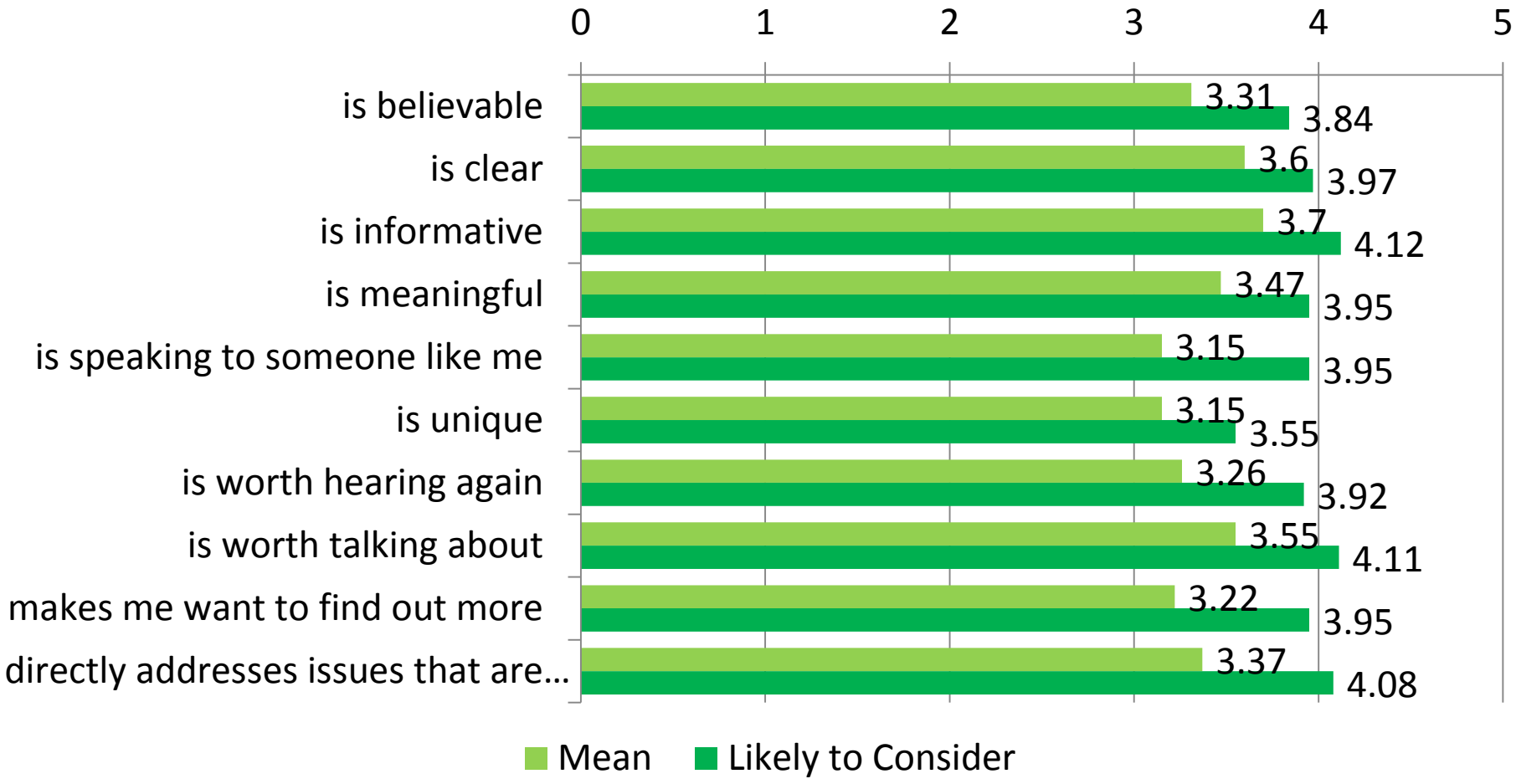
Message Interest and Action

Please rate how interested you would be in a plug-in electric vehicle based upon the information shared in this message with 1 being “not interested at all” and 5 being “very interested”
Please rate how likely you would be to request additional information about plug-in electric vehicles based upon the information shared in this message with 1 being “not likely at all” and 5 being “very likely”



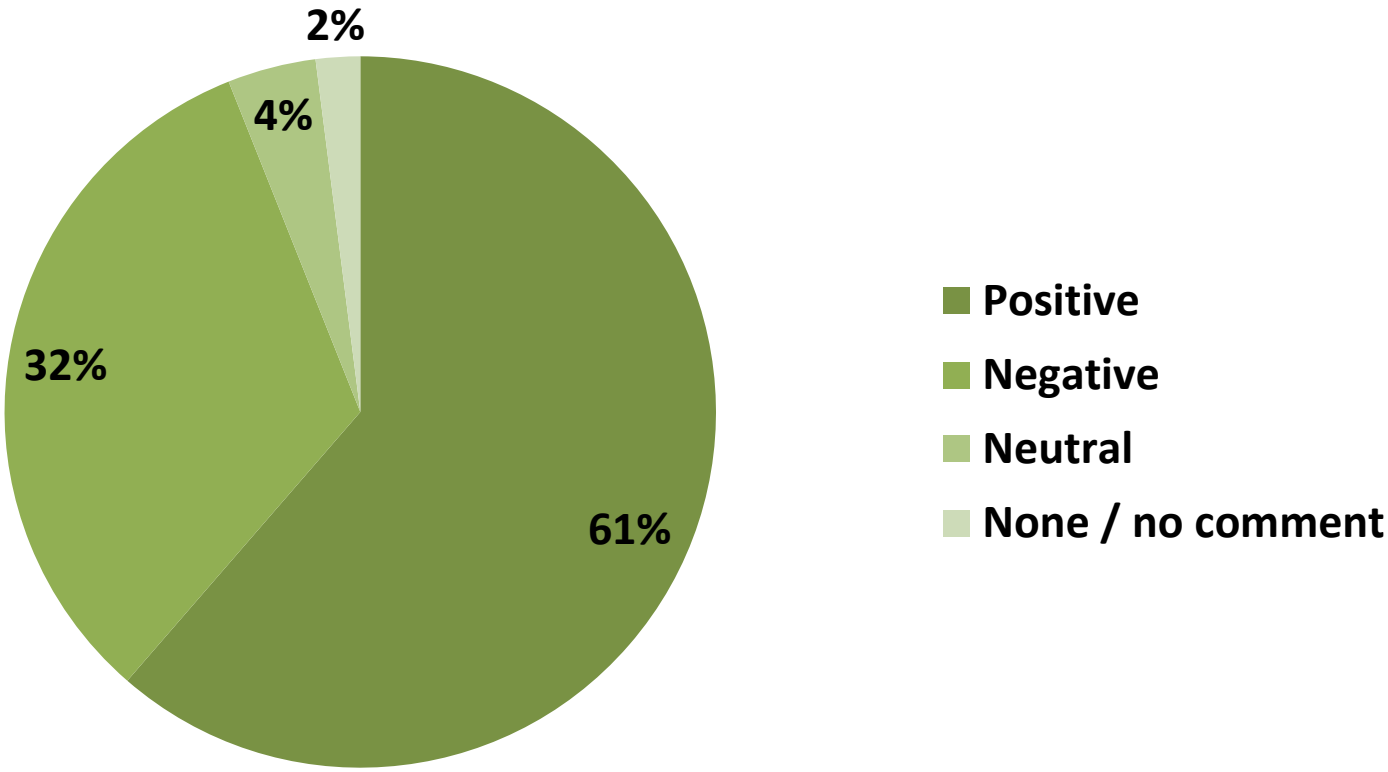
Message Effectiveness

Please rate to what extent you agree or disagree that this message is….



Message Overall Takeaway

Please rate to what extent you agree or disagree that this message is….



Message Overall Takeaway

What are your overall thoughts on the message you just read?

	Count	Percent
Positive	318	61%
Comments about Information	165	32%
Good / Interesting information	125	
Agree with / believable information	37	
Vehicle specific comments	136	26%
Good / Like the concept of electric vehicles / would consider purchasing	105	
Less expensive to maintain / run	17	
Fuel / energy efficient	7	
Specific non-vehicle advantages mentioned	48	9%
Energy independence / reduction on foreign oil	21	
Environmental benefits / clean	18	
Alternative energy / fuel source	12	
Job creation	11	
Miscellaneous Positives	15	3%
Good / Liked everything	15	

Message Overall Takeaway

What are your overall thoughts on the message you just read?

	Count	Percent
Negative	169	32%
Negative information specific comments	85	16%
Disagree with the information / propaganda / unbelievable	38	
Need additional / unbiased information	23	
It sounds like a political ad / propaganda	16	
Too long and wordy / too much information to read	8	
Negative vehicle specific comments	**85**	**16%**
High vehicle cost / purchase price	30	
Lack of a power source / can't drive long distances	20	
Electricity in expensive	12	
Poor / don't like the concept of electric vehicles / wouldn't consider	10	
Electricity comes from burning coal	9	
Concerned about reliability	7	
Technology still not fully developed	6	
Batteries don't last long / expensive to replace batteries	5	
Takes a long time to recharge	3	
Disadvantages (non-vehicle specific)	**6**	**1%**
Disagree that taxpayers should subsidize	3	
Don't believe the job statement / potential loss of jobs in traditional cars	3	

Message – Most Important Points

What were the most important points in the message?

	Count	Percent
Positive	417	80%
Vehicle specific comments	245	47%
Less expensive to maintain / run	120	
Batteries have a longer charge / go farther	54	
Fuel / energy efficient	47	
Safe / reliable	28	
Affordable	17	
Reduced routine maintenance	17	
Good / Like the concept of electric vehicles / would consider	17	
Power sources / recharging sources will increase in the future	11	
Specific non-vehicle advantages mentioned	240	46%
Energy independence / reduction on foreign oil	132	
Environmental benefits / clean	113	
Job creation	74	
Alternative energy / fuel source	20	
Tax advantages	9	
Comments about information	26	5%
Good / Interesting information	14	
Everything in it is important	10	
Miscellaneous Positives	2	0.4%

Message – Most Important Points

What were the most important points in the message?

	Count	Percent
Negative	48	9%
Negative vehicle specific comments	24	5%
High vehicle cost / purchase price	15	
Poor / don't like the concept of electric vehicles / wouldn't consider	3	
Technology still not fully developed	2	
Lack of a power source / can't drive long distances	2	
Negative information specific comments	20	16%
Disagree with the information / propaganda / unbelievable	11	
It sounds like a political ad / propaganda	4	
Need additional / unbiased information	4	
Too long and wordy / too much information to read	2	
Disadvantages (non-vehicle specific)	**3**	**0.6%**
Don't believe the job statement / potential loss of jobs in traditional cars	2	

Message – Potential Issues

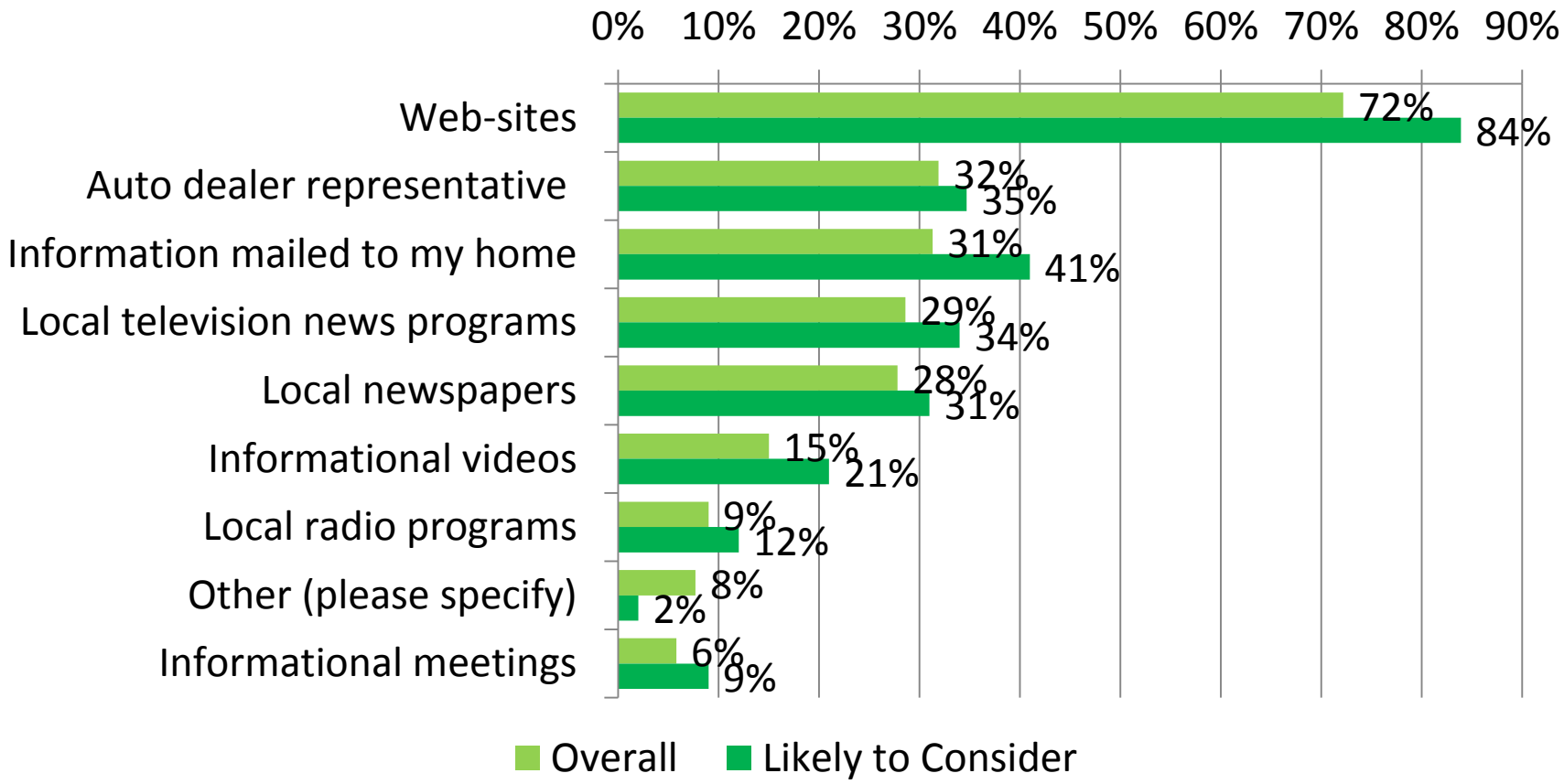
Did anything about the message you just read bother you or turn you off?

	Count	Percent
Negative vehicle specific comments	**116**	**22%**
High vehicle cost / purchase price	53	
Lack of a power source / can't drive long distances	28	
Poor / don't like the concept of electric vehicles / wouldn't consider	10	
Electricity comes from burning coal	9	
Electricity is expensive	7	
Batteries don't last long / expensive to replace batteries	4	
Length of time to recharge	4	
Technology still not fully developed	3	
Concerned about reliability	2	
Negative information specific comments	**81**	**16%**
Disagree with the information / propaganda / unbelievable	39	
Need additional / unbiased information	18	
Too long and wordy / too much information to read	13	
It sounds like a political ad / propaganda	10	
Poor / boring / uninteresting	1	
Disadvantages (non-vehicle specific)	17	3.3%
Don't believe the job statement / potential loss of jobs in traditional cars	10	
Disagree that taxpayers should subsidize	6	

Communication
Target Demographic Elements

Communication Channels

What is the most effective way for you to obtain information about alternative fuels?



Target Audience – Early Majority

Deloitte Profile	Confirmed
Higher than average incomes	X
Live in a suburban area	X
Concerned about the environment	X
Willing to pay a premium for convenience	X
Most important criteria is reliability	X
Concerned about dependency on foreign oil	X
Added	
Educated (college degree or higher)	
Likely to own a single family home	

Summary

- High level of awareness for electric vehicles, low for all others forms of alternate fuel technologies
- Low familiarity with all technologies except hybrid
- Moderate interest and consideration. Providing definition and detail positively impacts consideration
- Price, reliability, and charging convenience and costs are the top criteria driving selection
- Driving range appears to be the biggest barrier.
- Among the early majority, environmental concerns and reducing dependence on foreign oil are also important.

Summary

- Similar to the Deloitte studies, consumer driving behaviors are aligned with PEV single charge driving range, however; their range expectations required before they will considering purchase are not
- Consumers expect a PEV to cost between $15 - $35,000
- The message tested well overall and even stronger among consumers who fit the criteria for the early majority
- Research validated the demographic criteria established in the Deloitte study for early majority consumers

Next Steps

- Summary report upon completion of fleet manager phone interviews
  - Executive summary of both studies
  - Data tables by question