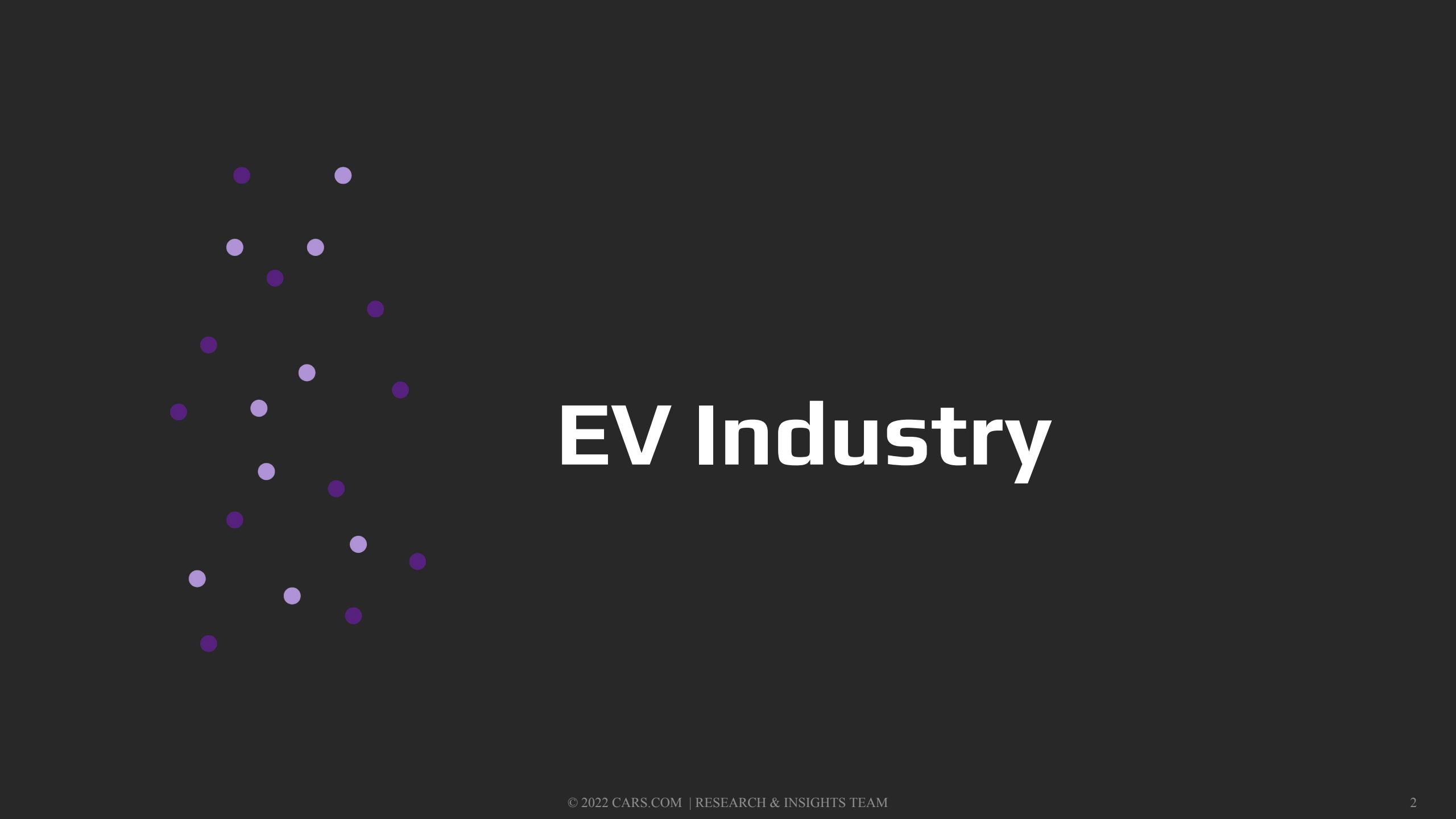


EV Perceptions by Gender

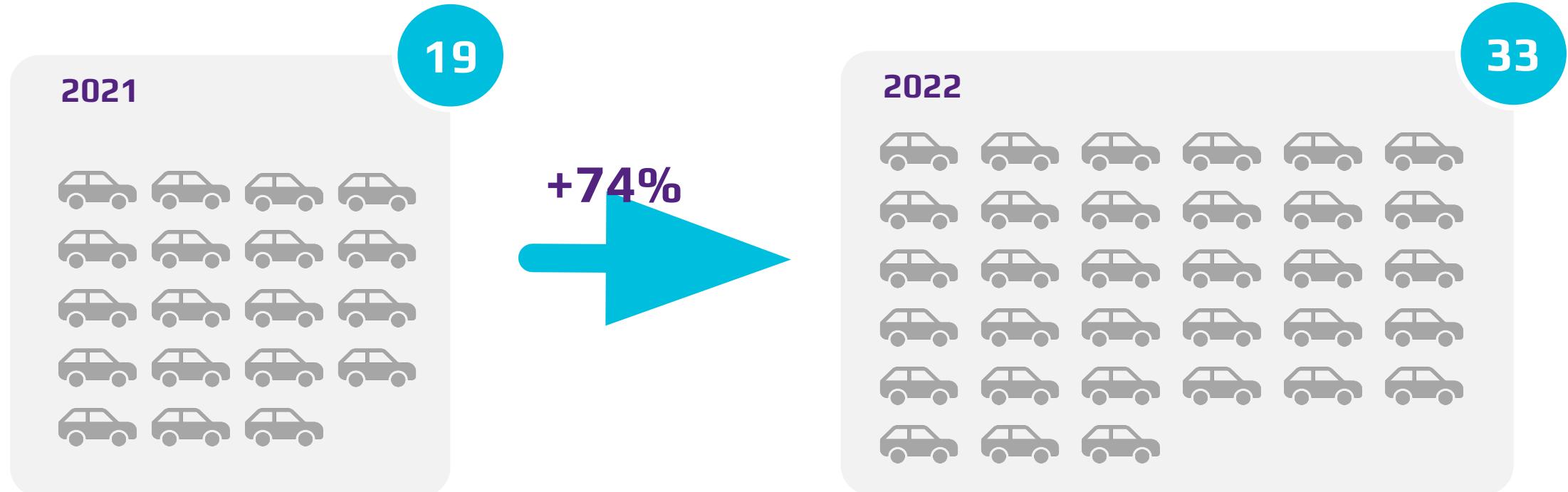
A look into gender variances in EV adoption





EV Industry

Marketplace of BEVs is growing at a rapid pace

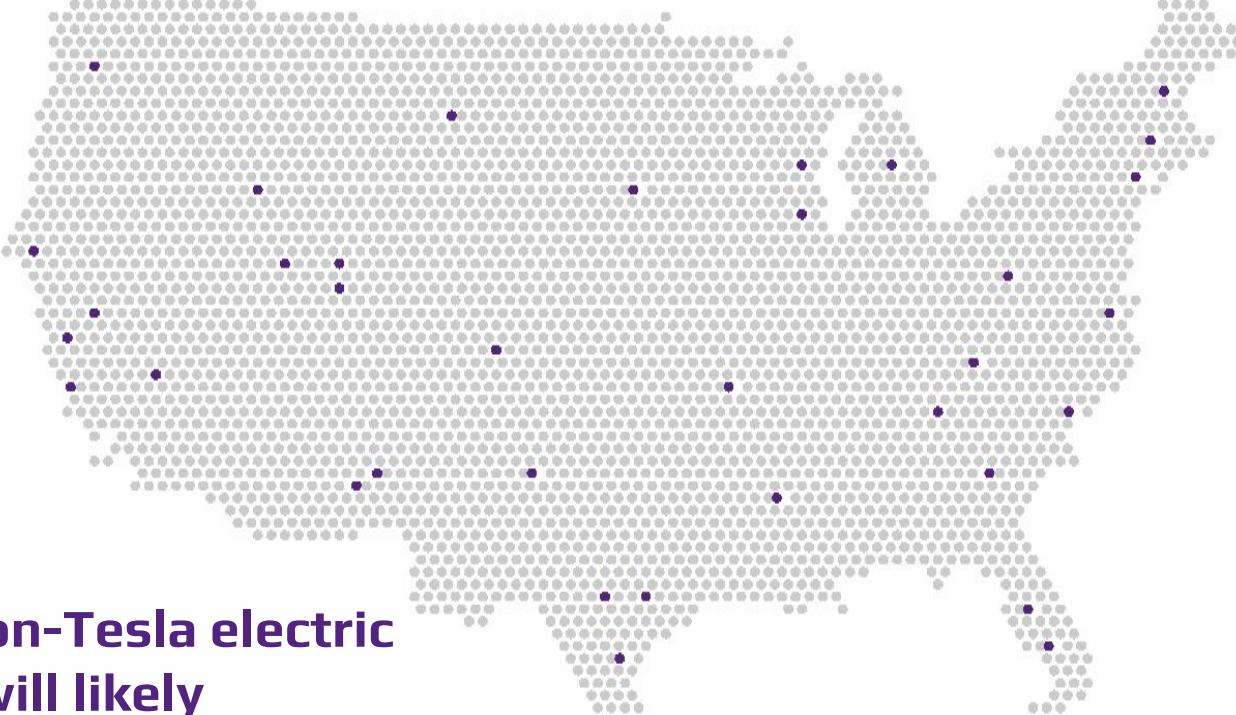


Current U.S. EV sales

EV market share in the U.S. doubled year-over-year, at 5.6 % for Q2. During the first six months of 2022, EV registrations grew 60% year-over-year (in a market that's down 18%).

While Tesla dominated the EV segment in H1 2022, **non-Tesla electric vehicle sales are growing at a similar rate and will likely outpace Tesla sales very soon.**

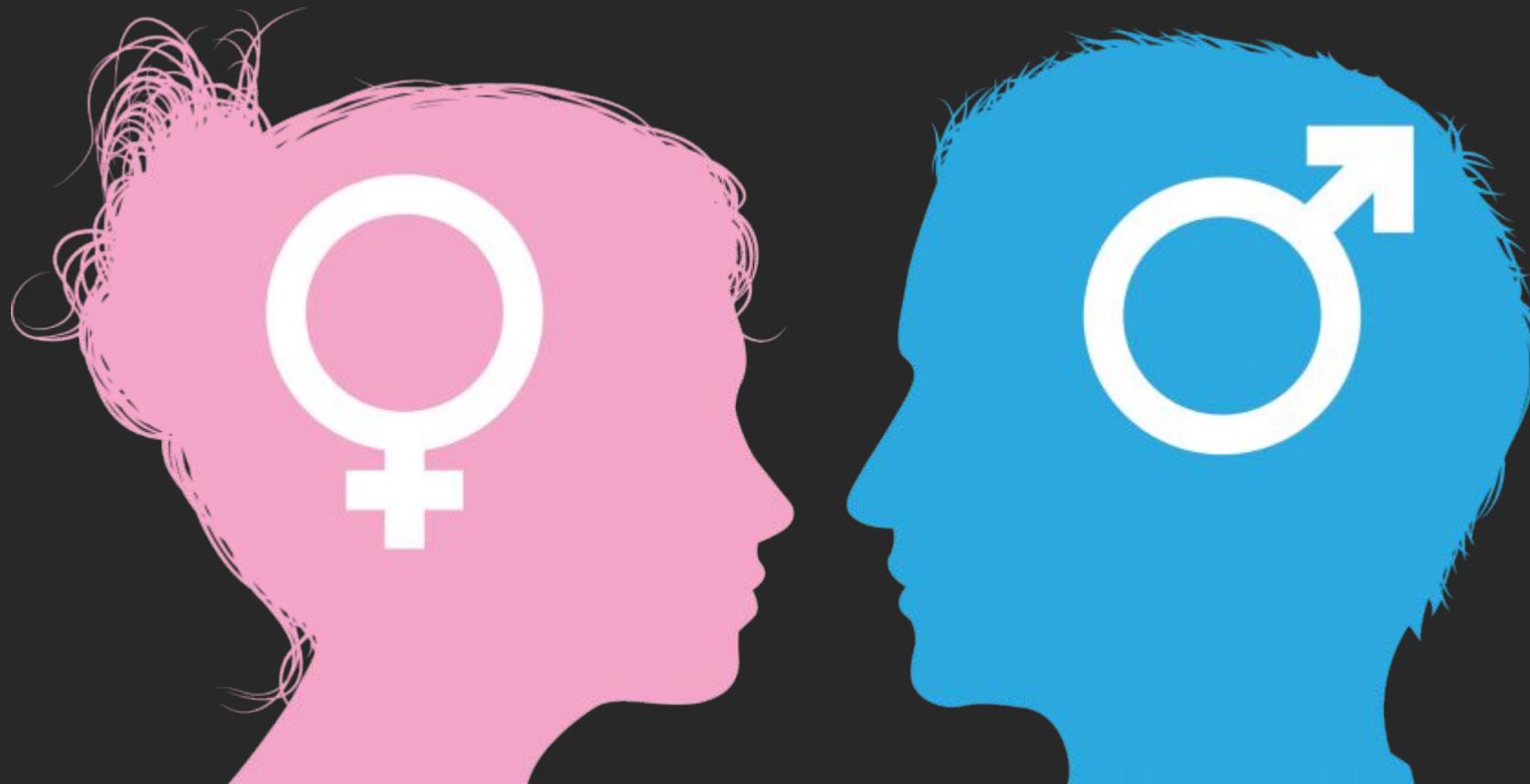
The Hyundai Motor Group (Hyundai and Kia) is currently the second biggest player in the U.S. EV market, with the IONIQ 5 being the hottest newcomer. **Following, is Ford driven by Mach-E sales (and soon the F-150 Lightning).**



Top 10 best-selling EVs in U.S. (1H22)



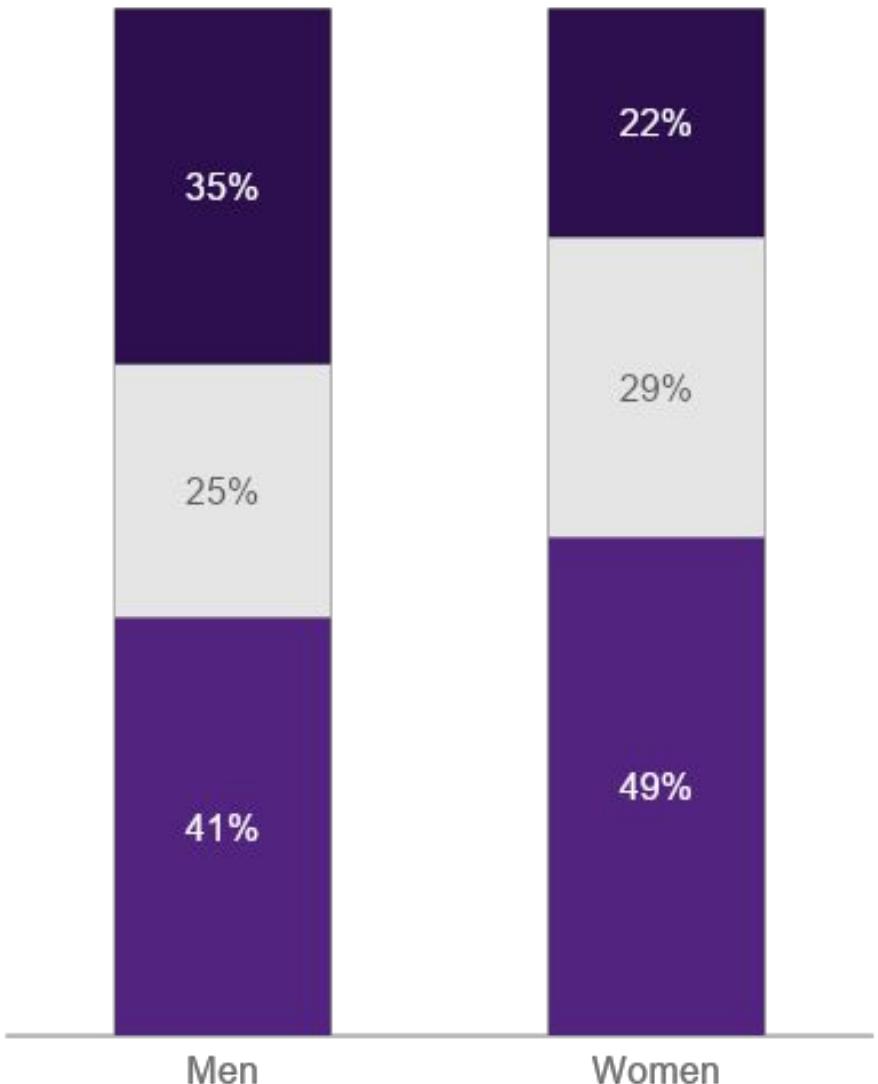
1. Tesla Model Y: 103,215 units
2. Tesla Model 3: 97,075 units
3. Ford Mustang Mach-E: 18,399 units
4. Tesla Model S: 15,317 units
5. Tesla Model X: 13,384
6. Hyundai Ioniq 5: 13,200 units
7. Kia EV6: 12,036 units
8. Nissan Leaf: 7,911
9. Kia Niro EV: 6,931 units
10. Polestar 2: 4,873 units



EV Consideration Among **Cars.com** Visitors

Men are significantly more likely to be considering an EV compared to women, with over 1 in 3 men on Cars.com considering an EV for their next vehicle purchase compared to just over 1 in 5 women.

EV Consideration by Gender



Top Brands

(10% or higher among women)

Toyota

Honda

Chevrolet

Ford

Hyundai

Kia

Tesla

Nissan

Audi

Lexus

Subaru

BMW

Volkswagen

Volvo

Jeep

Mercedes-Benz

Mazda

Land Rover

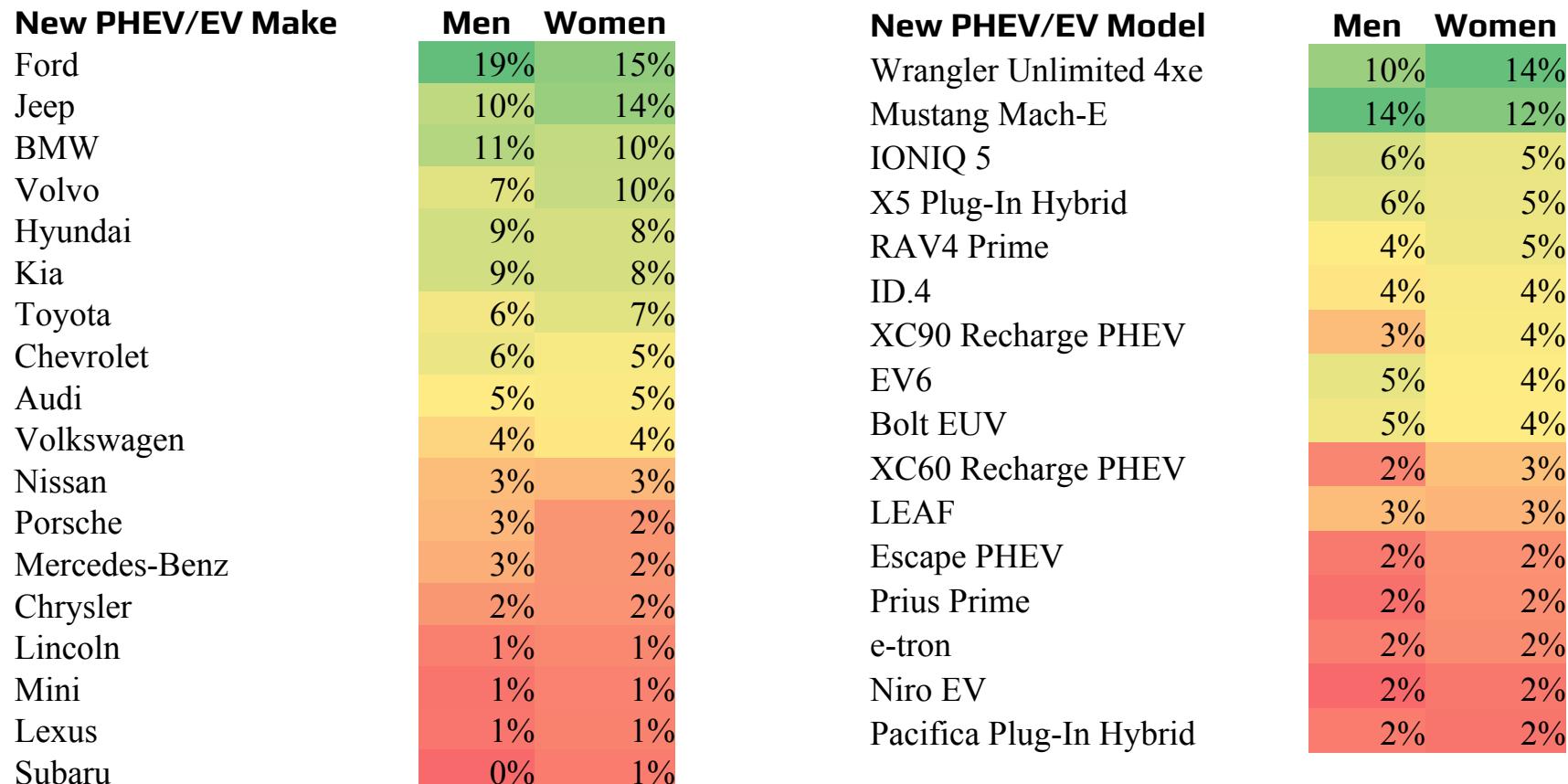
	Men	Women
Toyota	35%	48%
Honda	24%	31%
Chevrolet	32%	26%
Ford	37%	24%
Hyundai	29%	24%
Kia	24%	21%
Tesla	37%	20%
Nissan	15%	20%
Audi	24%	19%
Lexus	11%	18%
Subaru	9%	18%
BMW	19%	15%
Volkswagen	19%	15%
Volvo	13%	15%
Jeep	9%	14%
Mercedes-Benz	13%	13%
Mazda	11%	10%
Land Rover	4%	10%

EV brand consideration by gender

Women are more likely to gravitate towards trusted and established OEMs (Toyota, Honda), where men have the highest interest in Tesla, followed by Ford. 15% of men also mentioned Rivian, where only a few women did.

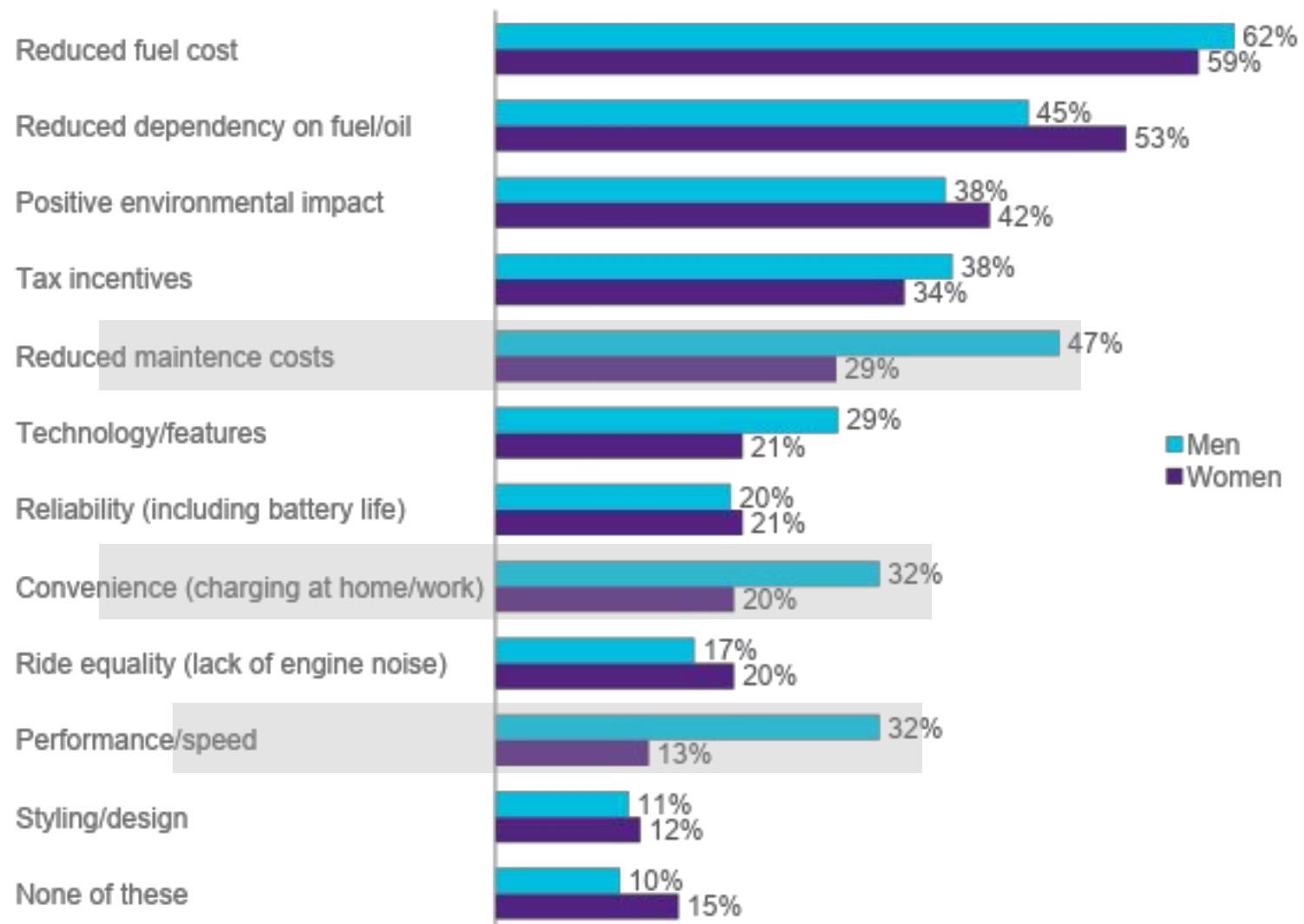
Top Make/Model EV Sales by Gender

According to 2022 PIN registration data for new PHEV/EV vehicles, women are most likely to purchase the Jeep Wrangler Unlimited 4xe, followed by the Mach-E.



Source: Cars.com internal data for new EV/PHEV vehicles, 2022 YTD

Main Benefits to EV Ownership



While women are most likely to find the reduced fuel cost as a main benefit to EV ownership, **men are significantly more likely to find reduced maintenance costs to be a primary benefit as well as performance/speed and convenience.**

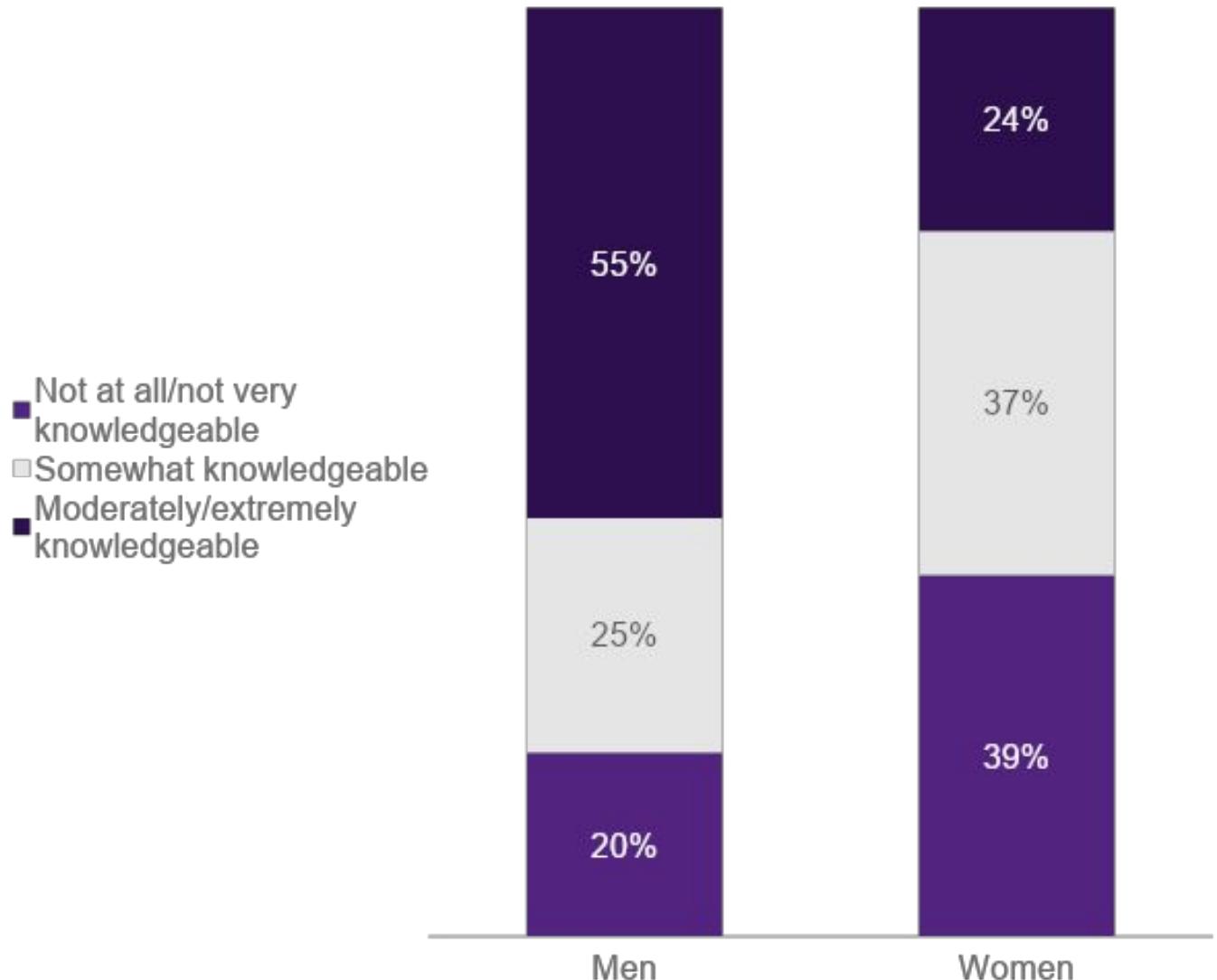
Perceived Drawbacks to EV Ownership



Both genders share initial price as the biggest drawback, but women are significantly more likely to have concerns around inability to charge at home or work, maintenance costs, home charging installation. **Men tend to have the typical concerns such as range anxiety and charging times.**

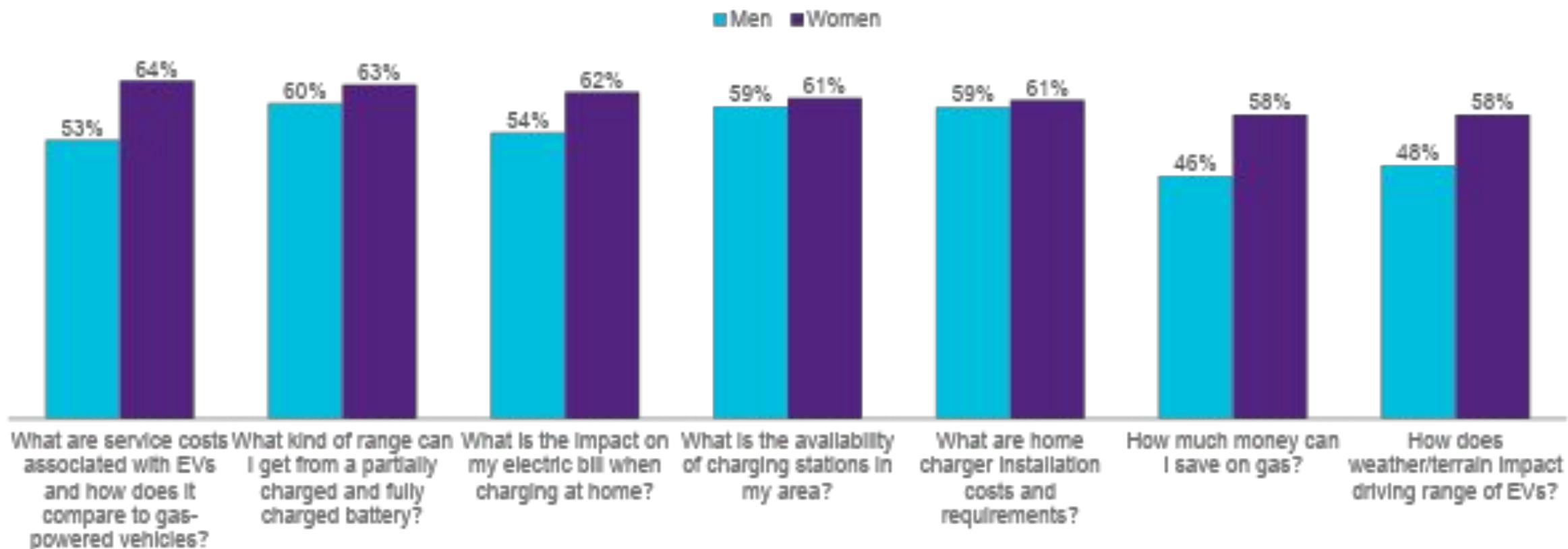
Men are significantly more likely to consider themselves very knowledgeable when it comes to EVs, while women (admittedly) have a lot learn.

EV Knowledge by Gender



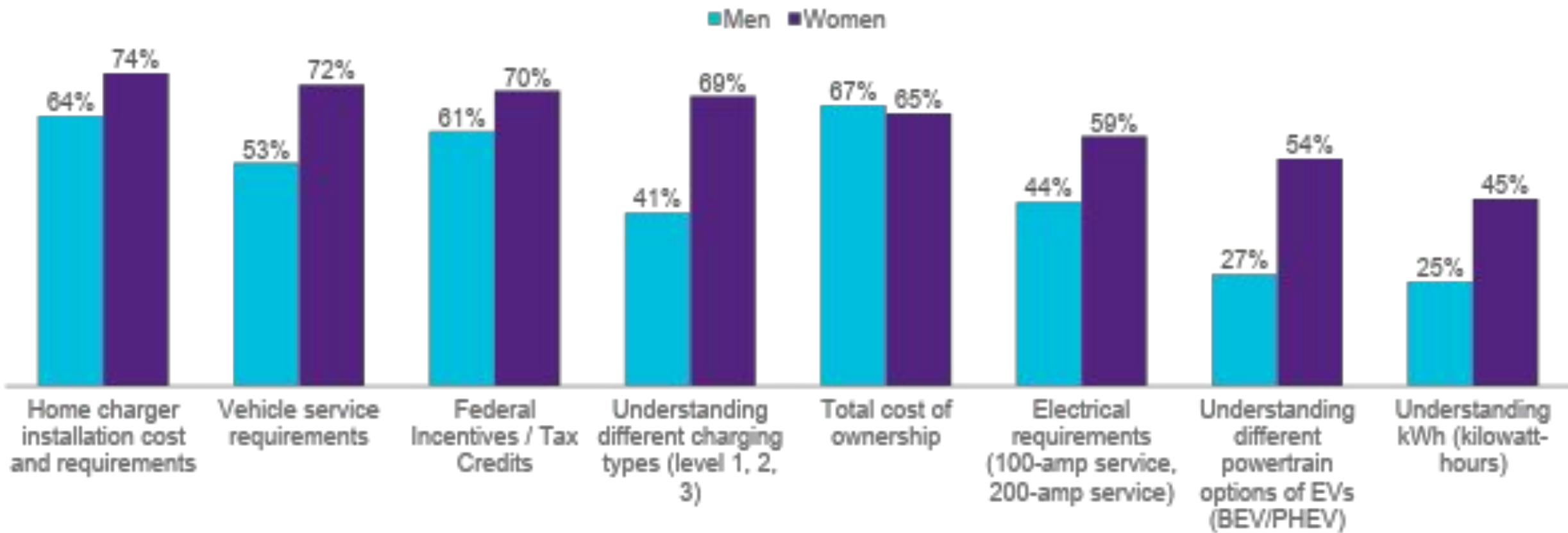
EV Topics of Interest (top 2 box %)

The good news is women are very receptive to learning more about EVs, specifically with understanding services costs, range and impact to electric bill.



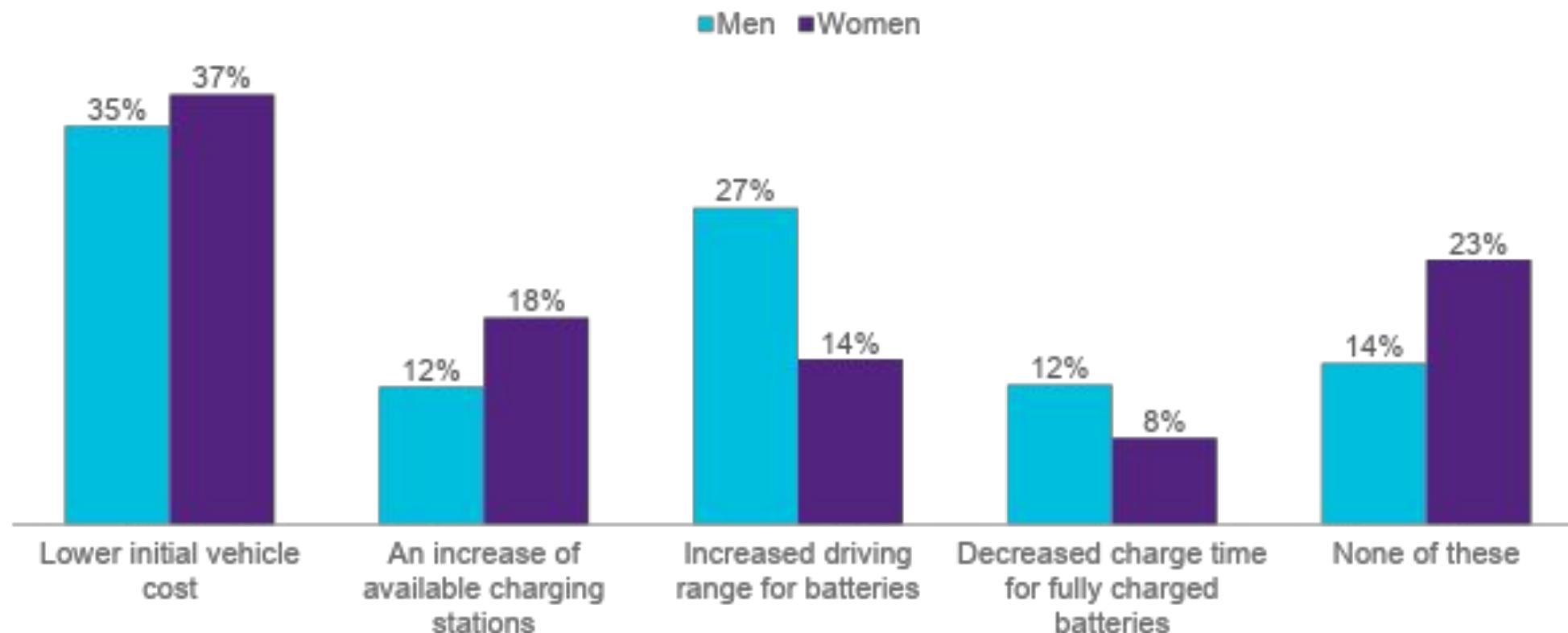
Most Helpful to Learn About EVs

Again, women have high interest in learning about home charger installation, EV service and tax credits. They are significantly more likely than men to want to learn about the different powertrains of EVs and understanding different charging types.



Most Impactful in Driving Purchase of EV

Lower initial cost would have the greatest impact on both genders in deciding to purchase an EV. Men are significantly more interested in seeing improved range for batteries.



Experiencing is believing

Repeated exposure (as well as multiple forms of gaining familiarity) are key elements for building EV adoption.

While the frequency in which consumers see EVs on the road plays an important part of adoption, **local dealership stocking EVs and consumers having a personal experience with one (driving or as a passenger)** are most likely to convert an ICE consumer to EV.

EV Exposure

■ EV shoppers ■ Non-EV shoppers

I see EVs on my commute

Dealerships in my town sell EVs

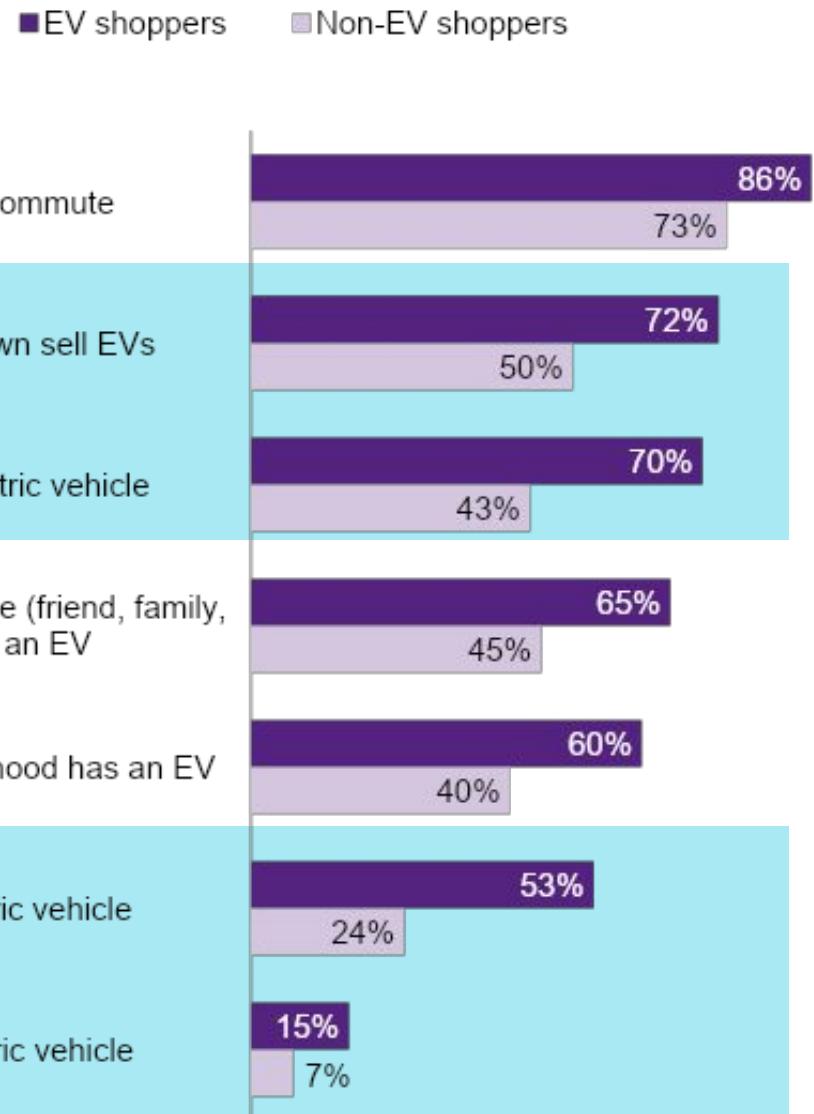
I've ridden in an electric vehicle

A person in my social circle (friend, family, colleague) owns an EV

A person in my neighborhood has an EV

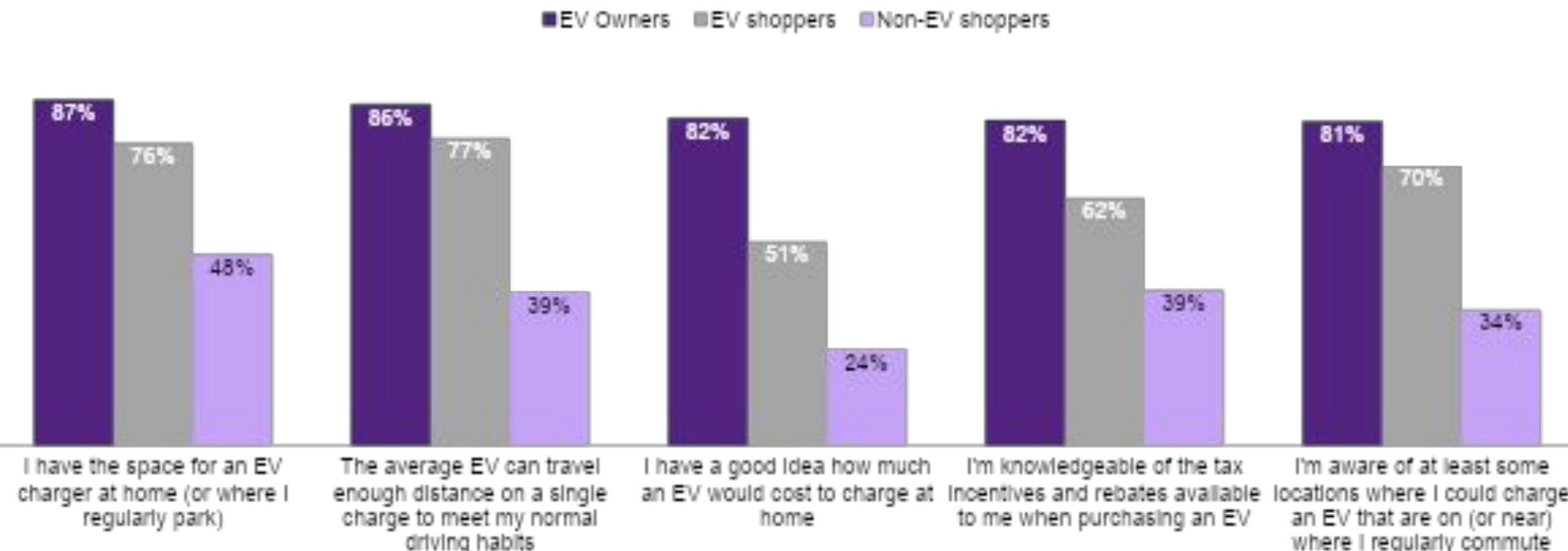
I've driven an electric vehicle

I've rented an electric vehicle



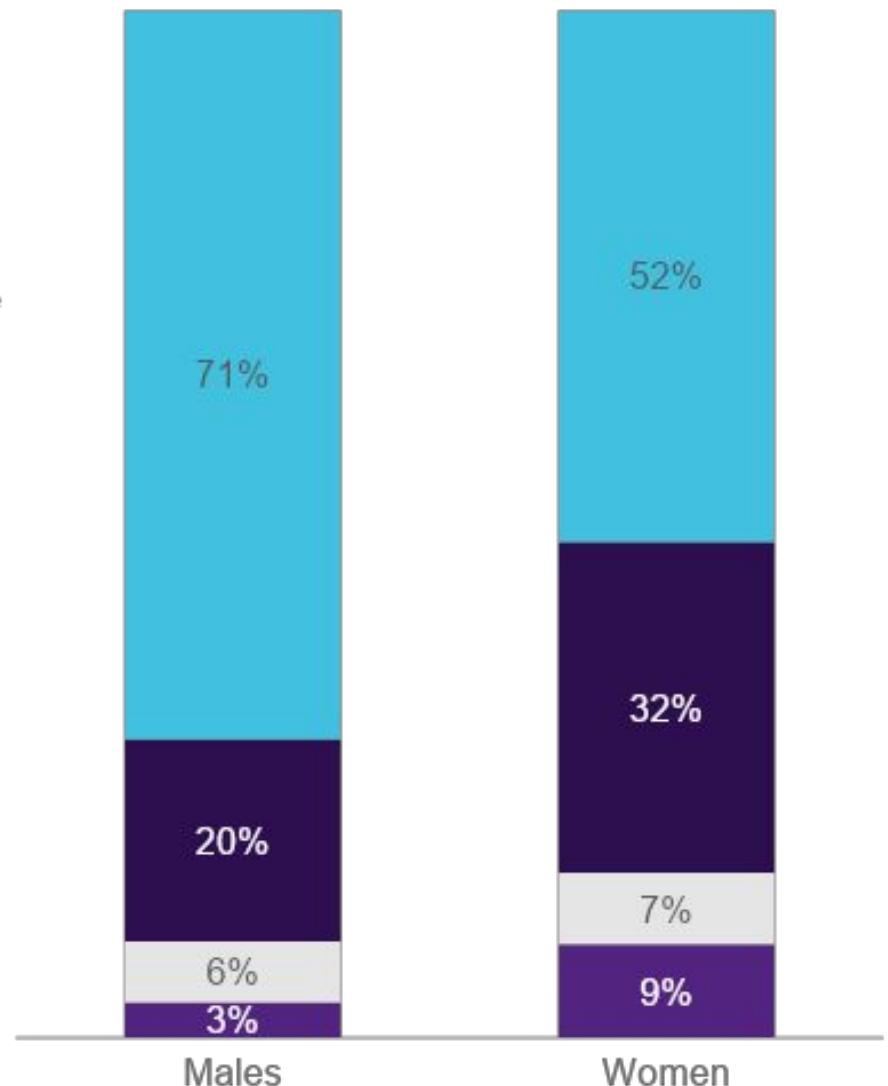
EV Readiness

Most EV owners or intenders know (or have considered) the major components of ownership (e.g., where and how to charge at home, distance traveled during their regular commutes).

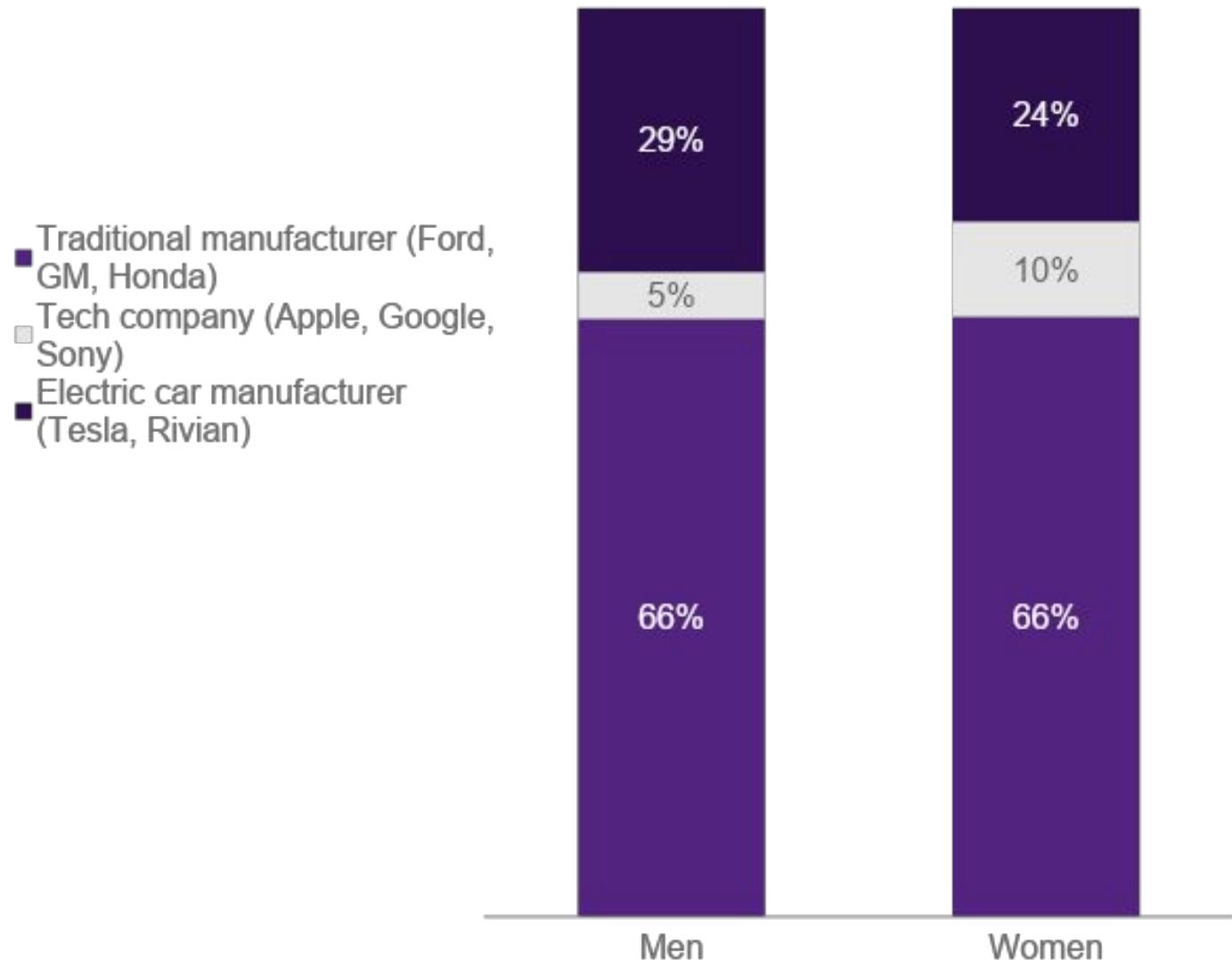


Men are significantly more likely to state they'd install a home charger compared to women (71% of men very likely vs. 52% or women).

Likelihood of Installing Home Charger



EV Manufacturer Trust by Type of Company



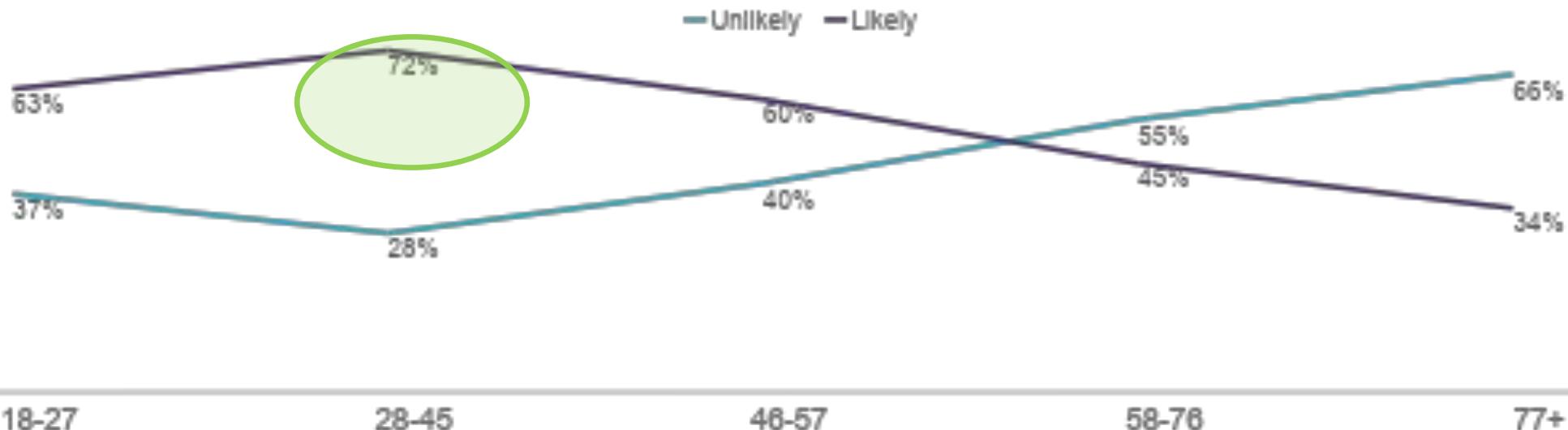
While news and social media love to talk about big tech creating the newest vehicles and auto innovations, **consumers say they prefer to buy from established automakers.**

Women are more likely than men to trust a tech company to develop an EV, but still low at only 10%.

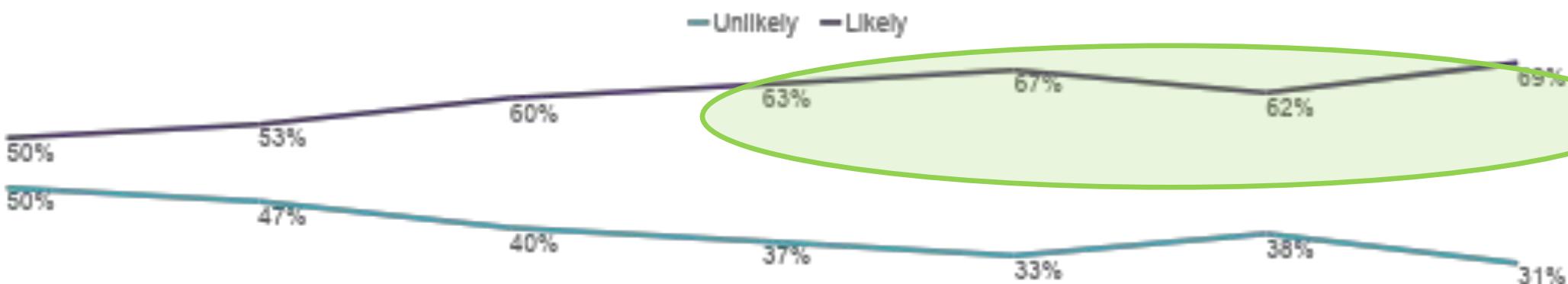
Who is the EV shopper?



EV Consideration by Age



EV Consideration by Income



EV Consideration by Current Vehicle Brand(s) Owned
 (lists limited to active brands meeting sample threshold)

Mass Market

Brand	Total Likely	Δ pp YOY
Volkswagen	61%	1%
Toyota	60%	5%
Honda	60%	5%
Ford	57%	3%
Nissan	56%	2%
Kia	56%	-3%
Ram	55%	+16% *
Hyundai	54%	2%
Mazda	54%	1%
Jeep	53%	7%
Subaru	53%	10%
Chevrolet	53%	2%
Dodge	52%	-1%
Mitsubishi*	50%	-8% *
Buick	49%	-2%
Chrysler	48%	6%
GMC	47%	11%

Premium

Brand	Total Likely	Δ pp YOY
Tesla	86%	-10% *
Audi	77%	-3%
BMW	74%	-5%
Acura	71%	4%
Infiniti	65%	+16% *
Volvo*	64%	+11% *
Land Rover*	64%	N/A #
Bentley*	64%	2%
Lexus	62%	-2%
Mercedes-Benz	59%	1%
Cadillac	53%	-4%
Lincoln*	45%	-1% *

* Small base size

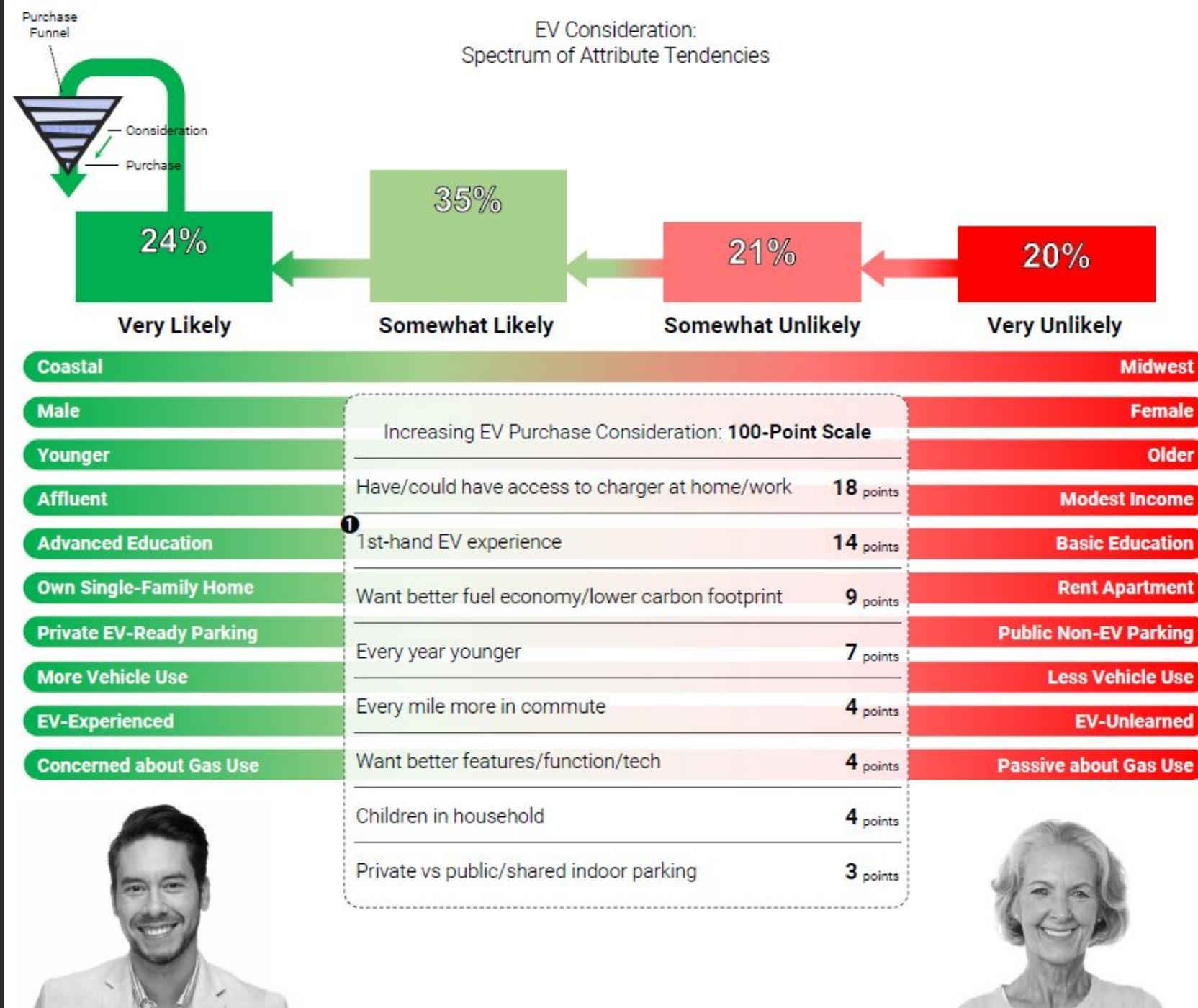
Source: J.D. Power EV Consideration Study 2022

VW owners have the highest EV consideration (up 1pp YoY to 61%), followed closely by Toyota and Honda (at 60%), which surged 5pp YoY.

Tesla is the only brand to post a double-digit decline YoY (-10pp) – a potential warning flag regarding perspectives and concerns among the brand's existing owner base.

Infiniti and Volvo both had double-digit YoY increases (+16pp and +11pp, respectively).

At a potential 14-point increase in consideration, it's easy to see how heavily 1st-hand EV experience correlates with EV purchase consideration, giving credence to offering ride & drives, take-home test drives and other similar activities that give shoppers an opportunity to experience the vehicles for themselves.



How can vehicle manufacturers better educate and/or market EVs to consumers?



Theme #1: More real-world, practical knowledge

Commercials with **more real world uses**. Don't leave consumers guessing whether it will be able to meet their needs. Show what real-world mileage I can expect on my commute with another full-grown man, while running the heater on a cold winter day. Will it make an hour commute each way? **How many miles can you actually expect in non-ideal conditions.**

I need to know how and **who installs the charger at my home**. Is it my responsibility? Does the dealer or manufacturer arrange it, pay for it? How much is it. I also want details of length of time to charge, energy costs. Where are public chargers?

The **maintenance free (almost) aspect** was a key reason a friend bought one, and I don't hear much about that.

By talking about the absolute health & environmental damage of an internal combustion engine cars. And the **advantages of making the planet more livable**, cleaner and healthier by driving electric vehicles. And in terms of appealing to different demographics the idea that an electric car is dramatically faster than gas powered vehicle, or **how much quieter they are** not only for the occupants of the car but the surrounding areas of where the car travels.

Describe additional costs of ownership outside initial purchase - how much does it cost to charge at home (utility only), how much does it cost to purchase charging hardware, how much does it cost to have that hardware installed/can it be installed by a homeowner?

How can vehicle manufacturers better educate and/or market EVs to consumers?



Theme #2: More dealership education

Car **dealers must understand and promote electric vehicles**. Many dealers are geared to internal combustion vehicles only; for example, no charging stations on site and lack of understanding of maintenance schedules for an EV.

Better educate and train dealerships. Talk about how EV provide better driving experience. Convenience of charging at home.

Have EVs available in showroom so we can see them first-hand and test drive them. Dealers don't seem as interested in selling EVs.

By **educating their dealerships**. Most of the dealerships I go into don't know a thing about the automobiles they sell.

How can vehicle manufacturers better educate and/or market EVs to consumers?



Theme #3: EV events

Better informed dealers, OEM sponsored EV events at shopping areas to demonstrate EV capabilities and provide opportunities for consumers to interact with the vehicle. Charging stations at dealerships to demonstrate.

Dealerships should have a demo model available to drive - many I visited had none on the lot to look at/try as demand was so high. Also, demonstrations at public shopping areas

Bring actual EVs to events and let people see them, drive them, and ask questions of actual EV owners. Pay people to drive them or let them borrow them. People just need to know they're out there and they're legit.

Have days when dealers target neighborhoods to offer people test drives on EVs.

Thank you!

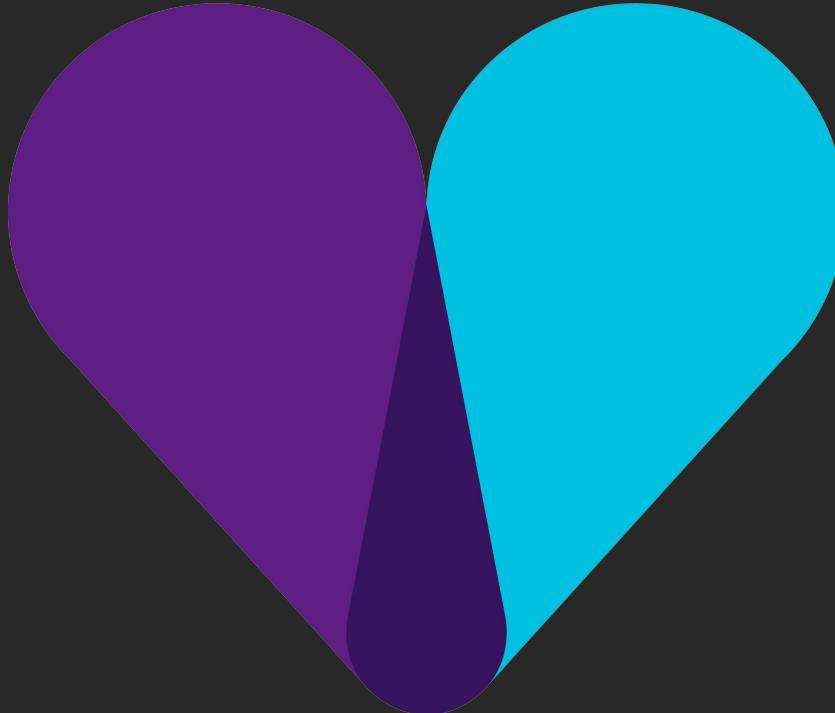


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2023 Federal tax credit on new vehicles

The Inflation Reduction Act will apply to EVs delivered after December 31, 2022



The current credit has been extended

Consumers will continue to qualify for a \$7,500 federal tax credit for a full battery or advanced plug-in hybrid until December 2032 (instead of January 2023).



OEM tax credit cap by sales volume is gone

The tax credit only applying to automakers' initial 200,000 EVs sold has been eliminated. This makes GM, Tesla, and Toyota once again eligible.



Credit amount depends on vehicle type

Revised credit applies to any vehicle up to \$55k MSRP and vans, SUVs, and trucks up to \$80,000 MSRP. Qualifying PHEVs also continue to apply if they are equipped with a battery over 7 kWh.



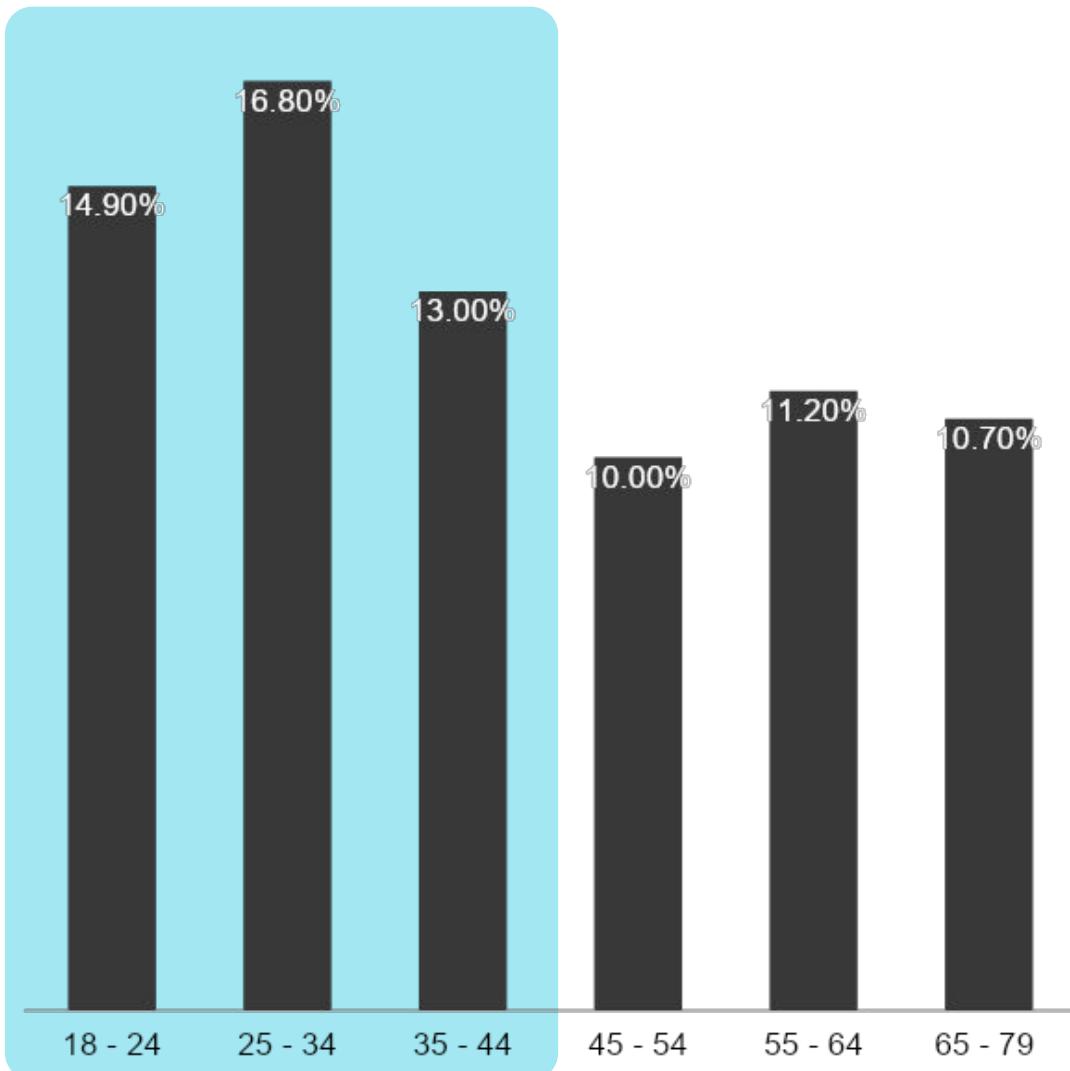
Household income is now a factor

The federal EV tax credit will be available to individuals reporting adjusted gross income (MAGI) of \$150,000 or less and \$225,000 for the head of household. For joint filers, the ceiling is \$300,000.

Source: fueleconomy.gov; data reviewed August 2022

EV Consideration by Age Group

Likely + Very Likely



"How likely are you to consider an electric vehicle for your next vehicle purchase?"
Cars.com's Consumer Metrics Q2 2022 to-date

The highest EV consideration among consumers are those 44 or younger.

Summary: Cars.com EV shoppers

1. Cars EV shoppers are largely undecided on make and model of EV.
2. Most Cars.com EV shoppers have been considering an EV for less than a year.
3. More than half of Cars.com EV shoppers are considering a new BEV, a number that's been growing over the last few years.
4. Cars.com shoppers cite increasing fuel prices, increased range of EVs, environmental benefits and better variety of available makes and models as top reasons for considering EVs.
5. Cars.com shoppers see the initial price of the vehicle, limited range/travel distance, and charging times as the main drawbacks of EV ownership.
6. Over half of Cars.com shoppers plan to purchase their car from available inventory at the dealership, while nearly a quarter plan to order online directly through the automaker website.
7. Over half of Cars.com shoppers are not willing to wait more than 6 months for their EV.

Sources: Cars.com's Consumer Metrics (ongoing) Survey and 2022 EV Study

Resources leveraged while shopping for an EV

- On average, **high-income consumers leverage more resources** as they research EVs.
- While those with a higher HHI turn to consumer reviews, family, friends, and professional reviews most, they are also most likely to rely on **dealership and brand websites, media coverage, and showrooms**.

