Build Competitive Advantage

Consumers Prefer NEVs with Wireless Charging

WiTricity®

What would double the purchase intent of a Neighborhood Electric Vehicle?

We did the research. It's wireless charging.

Electric vehicles (EVs) are in the news every day – new makes, new models, and even new prices. And with our renewed focus on green energy and sustainability, EVs will continue to be front and center in the transportation industry.

One segment within the EV space that doesn't get as much attention in the mainstream media – but growing in popularity – is Neighborhood Electric vehicles (NEVs), also known as Low Speed Vehicles (LSVs), or Golf Cars, or simply EVs. (For the sake of simplicity, we'll refer to them as NEVs in this paper.) This market was valued at over $3.8 billion in 2020 and is estimated to reach $11.8 billion by the end of 2031.*

As this market continues to grow and expand, we decided to check in on NEV owners and those who are intending to buy one to find out what they think and how they feel about charging those vehicles. WiTricity commissioned Tidewater Partners, an independent market research firm, to conduct a survey of roughly 1200 people in 2023.

* https://www.transparencymarketresearch.com/golf-cart-nev-market

The global golf cart and NEV market is estimated to reach

$11.8 billion

by the end of 2031.

What is a Neighborhood Electric Vehicle?

Neighborhood electric vehicle is a United States category for battery-powered electric vehicles that are built to have a top speed of ~25 miles per hour and a maximum loaded weight of 3,000 lbs. NEV is a federally approved street-legal classification that falls under the United States Department of Transportation (USDOT) classification for Low Speed Vehicles (LSV) and can be legally driven on most public roads with posted speed limits of 35 mph (56kph), or in some states, 45 mph (72kph) or less. An NEV has headlights, turn signals, mirrors, seat belts, and a VIN number. It must be titled, registered, and insured according to local laws and, in many states, may only be operated by a licensed driver. They range in price from $1,000 to over $20,000.

NEVs often resemble a golf cart in design. However, they are battery-electric and currently recharge by plugging into a standard outlet. As an all-electric vehicle, NEVs don't produce tailpipe emissions, and if they get recharged from solar or wind power, they don't produce greenhouse gas emissions after manufacturing. Driving range is about 30 miles per charge and batteries have a life expectancy of three years. What could be better for a quick drive around the community, trip to the beach, or a night on the town?

Get to Know NEV Owners and Intenders

The majority of NEV owners reside in Florida and California, though they are spread across the sunbelt. They tend to have high household income with many having a second home.

Nearly half of respondents use their NEV every day and only travel 2-5 miles. Unlike with electric vehicles, range is not an issue!

LSV/NEV Usage by the Numbers

Owners and Intenders agree: short trips, almost daily use, and charging every night/whenever parked

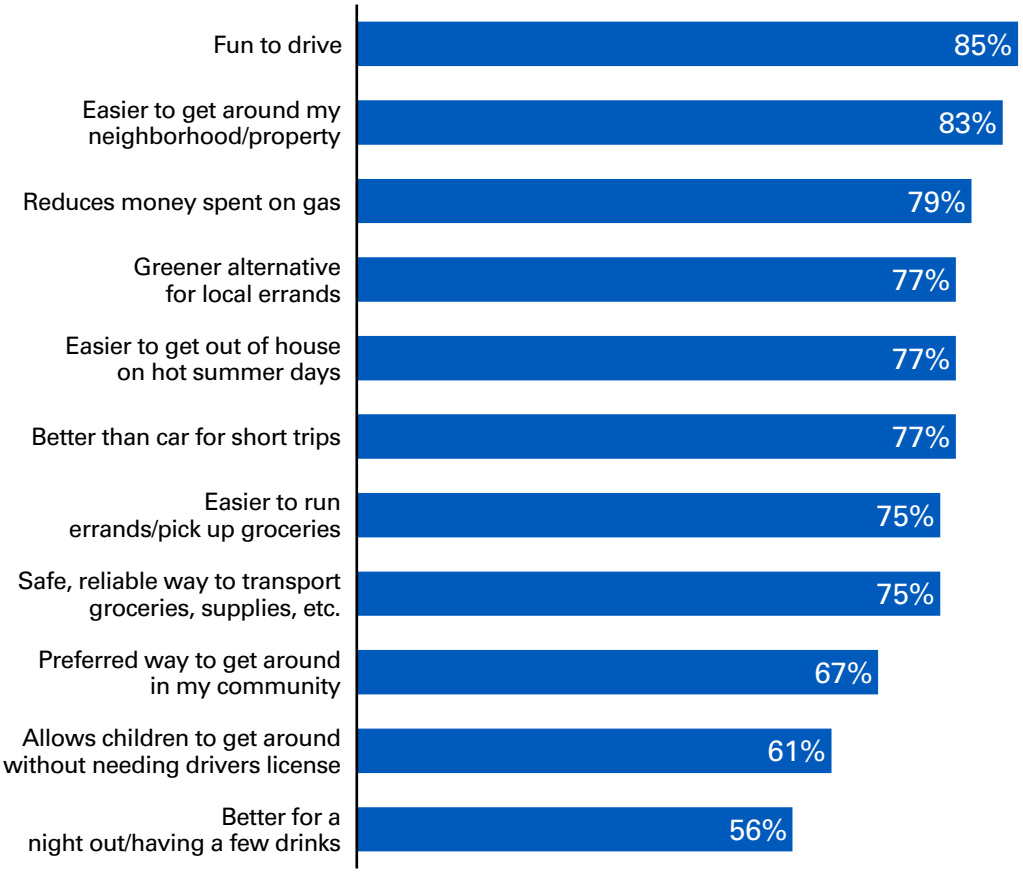
	Most frequent trip: 2-5 miles	LSV/NEV used almost every day	Most charge every night/ whenever parked
Owners	46%	45%	55%
Intenders	49%	48%	n/a

Source: Survey conducted by Tidewater, independent research firm, commissioned by WiTricity

One word describes why people own NEVs: FUN! In fact, nearly three quarters of respondents own an NEV for that reason. Yes, they're used to run errands and take care of daily needs, but when it comes to NEVs, it's all about fun.

Drivers for Owning/Driving LSVs/NEVs

% strong agreement (70 points or higher) on 100-point slider scale



Fun, easy way to get around are top reasons for owning or driving LSVs/NEVs. Saving money and being "green" are also leading rationales.

Source: Survey conducted by Tidewater, independent research firm, commissioned by WiTricity

LSV/NEV Purpose for Use

Use tilts towards having fun; less about practicality

	Having a good time	Riding around the neighborhood	Playing golf	Running errands	Property upkeep
Owners	71%	72%	57%	50%	52%
Intenders	70%	60%	50%	43%	44%

Source: Survey conducted by Tidewater, independent research firm, commissioned by WiTricity

LS/NEV Owners and Intenders Want Wireless Charging

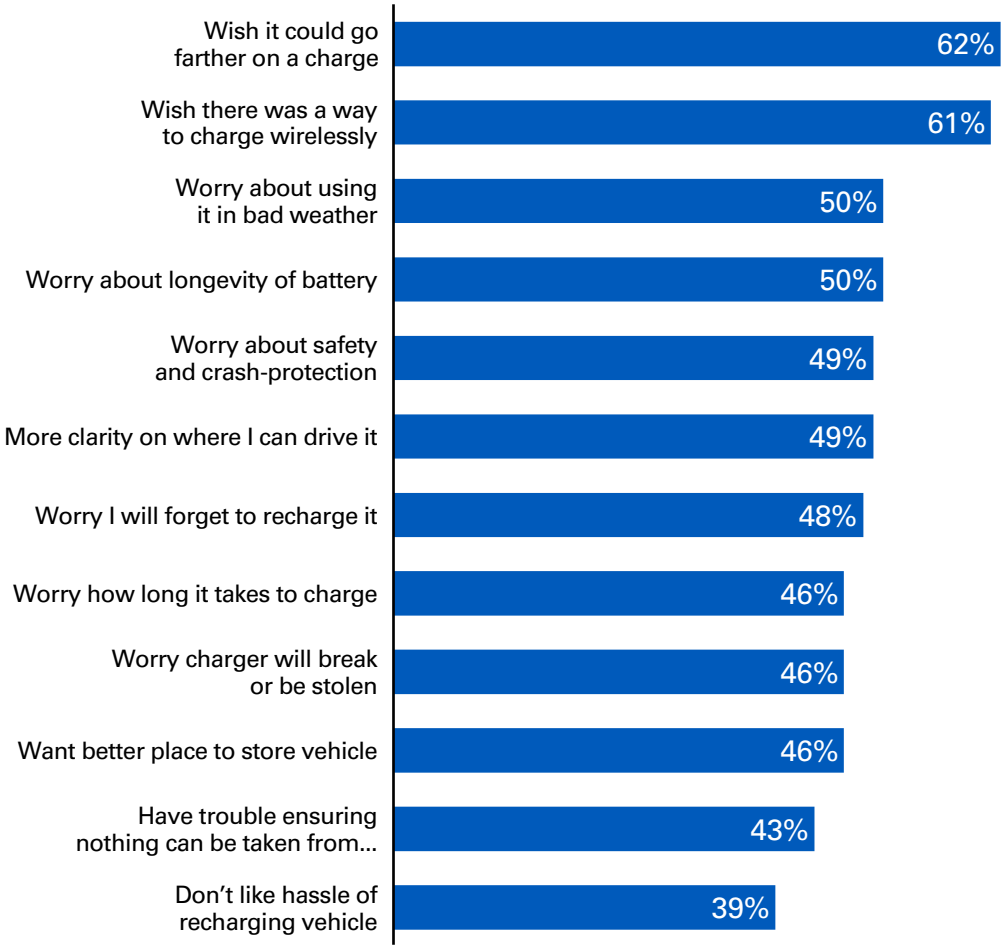
Like drivers of electric vehicles, the vast majority of NEV owners and intenders (more than 80%) charge their vehicle in their garage or carport. Only 7% charge at a charging facility.

As wireless EV charging becomes more mainstream and people become aware of its availability, it's not surprising that NEV owners and intenders are also aware. Awareness is higher among intenders than current owners, with particularly strong awareness among tech-forward owners and those who spent more on their NEV.

NEV drivers and intenders place wireless charging near the top of the list when it comes to concerns about their vehicle – directly behind wanting their vehicle to go farther on a charge. Interestingly, wireless charging is a more important concern than driving in bad weather – even though most NEVs are open vehicles (and it rains a lot in Florida!).

Concerns about LSVs/NEVs

% strong agreement (70 points or higher) on 100-point slider scale



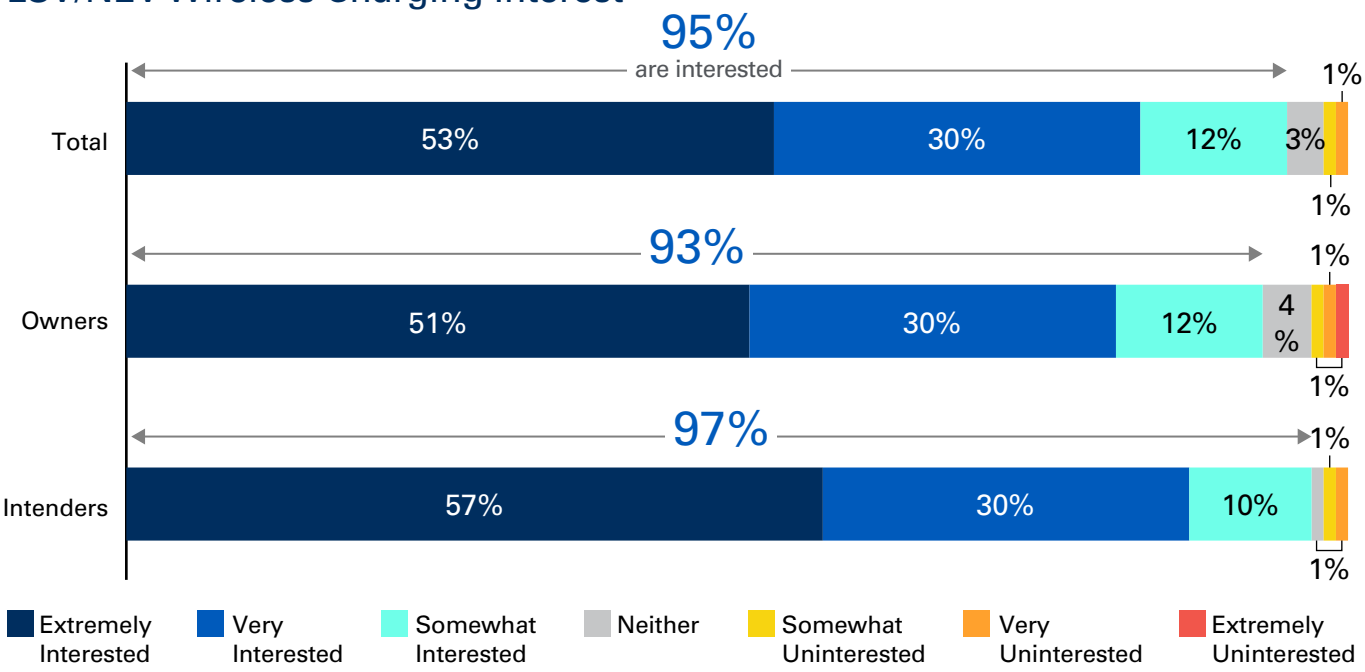
Desire for wireless charging among top 2 concerns of LSV/NEV Owners and Intenders.

Source: Survey conducted by Tidewater, independent research firm, commissioned by WiTricity

Seriously, People Want Wireless Charging

Once the availability of wireless charging was confirmed to the survey population, the vast majority (95%) of people surveyed – both owners and intenders – said they are interested. That 95% of those surveyed who are interested closely parallels similar data among EV owners and intenders in an earlier study commissioned by WiTricity.

LSV/NEV Wireless Charging Interest



Source: Survey conducted by Tidewater, independent research firm, commissioned by WiTricity

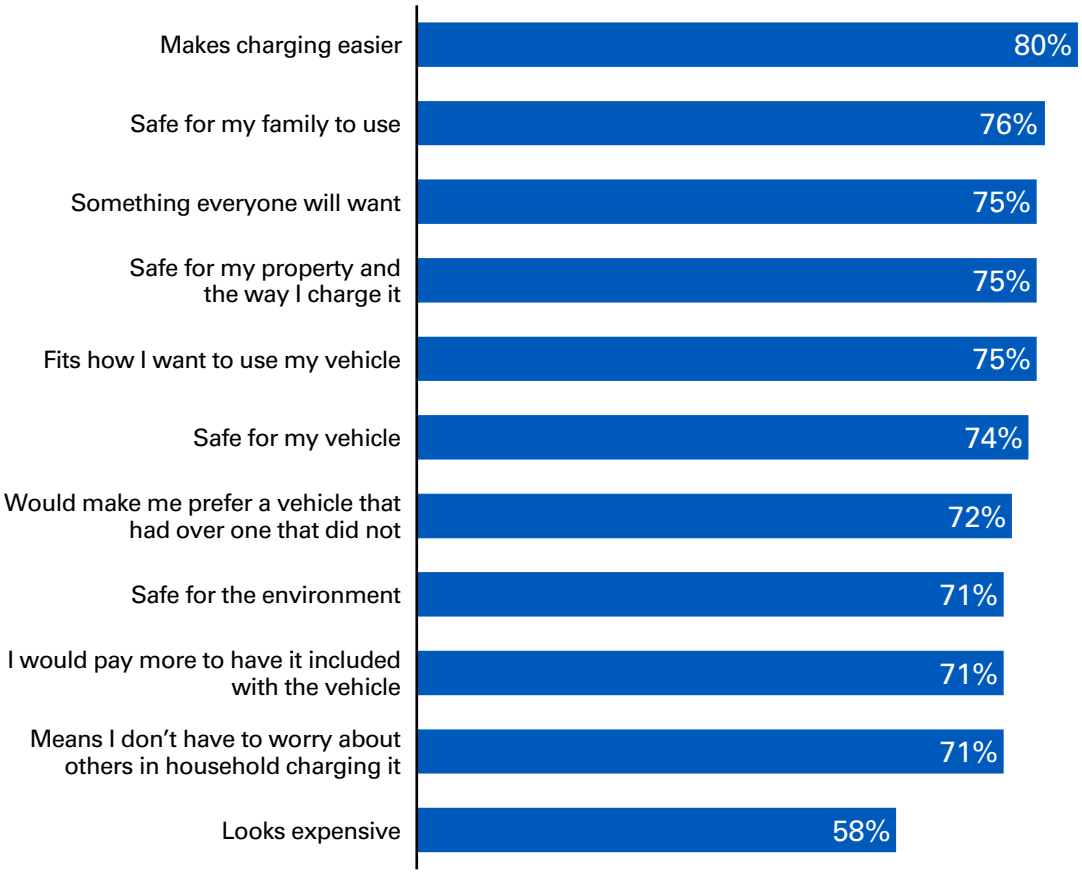
Why Do NEV Owners Want Wireless Charging?

Not surprisingly, NEV owners and intenders want wireless charging for the same reasons as people who drive electric vehicles want it – convenience and safety.

More than three quarters of the people surveyed say that the benefit of wireless charging is ease of use: "I have a bad back so I try to avoid bending over the mess with plugs," reported one individual. Nearly the same percentage want it because it's safe for their family, their vehicle, and the environment.

Benefits of Wireless Charging

% strong agreement (70 points or higher) on 100-point slider scale



Source: Survey conducted by Tidewater, independent research firm, commissioned by WiTricity

Wireless LSV/ NEV charging is easier, safer and something everyone will want.

Close to 3 in 4 say they would prefer an LSV/NEV with it over one without it.

Simple to use, I don't need to remember to plug in the vehicle, just park above it.

I have a bad back so I try to avoid bending over the mess with plugs.

It would eliminate cables. Everything in my home is wireless.

Just how interested is this audience in wireless charging? It is the 2nd most impactful feature (after 4 seats, facing forward) that would impact a purchase decision – regardless of how much any individual was thinking he or she would pay for this vehicle.

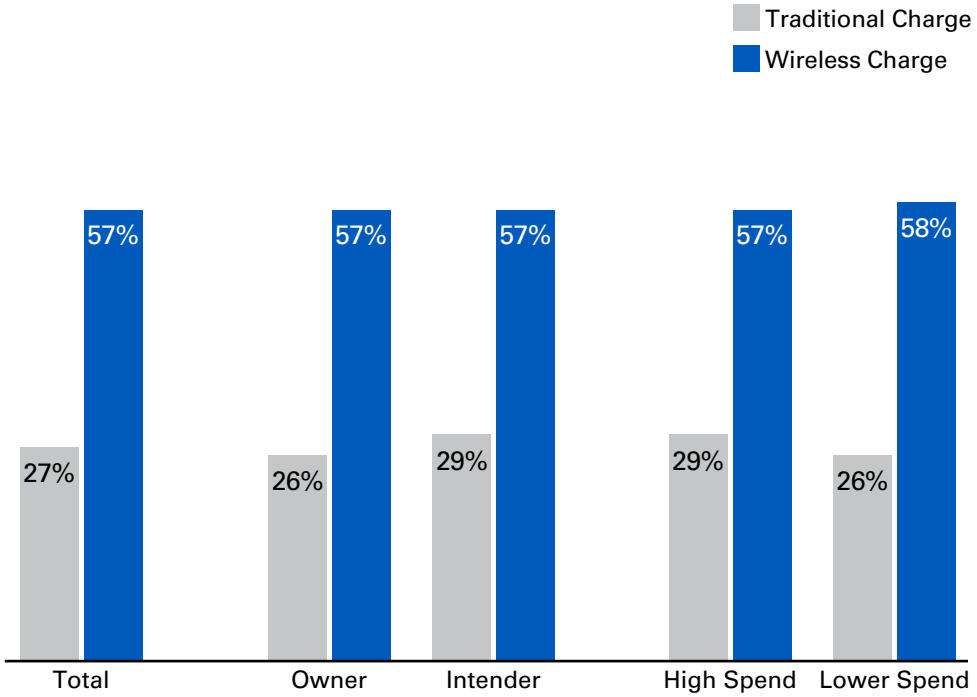
Put another way, if there were two vehicles side by side, one with the ideal configuration without wireless charging, and one with the ideal configuration WITH wireless charging, people would be twice as likely to purchase the one with wireless charging. Wireless charging DOUBLES purchase intent when added to a vehicle with optimal configuration, regardless of vehicle cost.

Likelihood to Purchase

Traditional vs. Wireless Charge

Optimal Configuration

- 4 seats (both rows facing front)
- Lifted suspension
- 8-10 hours to charge, 60+ mile range (lithium battery)
- Premium sound bar
- Apple CarPlay or Google Car compatibility
- Back up camera



Source: Survey conducted by Tidewater, independent research firm, commissioned by WiTricity

Wireless charging DOUBLES purchase intent when added to a vehicle with optimal configuration, regardless of vehicle cost. In other words, NEV makers who offer wireless charging will very likely take share from those who don't.

Summary

1. People who own Neighborhood Electric Vehicles – and those intending to purchase one – want wireless charging. They want it more than they worry about safety, storing their vehicle, or even whether their vehicle will be stolen.
2. NEV owners enjoy their vehicles and drive them because they're FUN! They also like that they're an environment-friendly solution for transportation and are an easy alternative for getting around town. But, like owners of electric vehicles, they find it hard to remember to plug in and are annoyed when someone else in the family forgets to plug in. The solution? Wireless charging.
3. And those intending to purchase a Neighborhood Electric Vehicle? They WANT wireless charging. Having it available doubles the likelihood they will purchase a vehicle. It's likely it doubles their fun too!

WiTricity has many resources to help you stay informed about wireless EV charging.

- Stay in-the-know by subscribing to our monthly **newsletter:** https://witricity.com/newsletter
- Check out our other **white papers:** https://witricity.com/media/additional-resources
- Watch **videos** that bring wireless EV charging to life: https://witricity.com/media/videos
- Read our **blog** with posts featuring keen insights and information on the hot topics surrounding wireless EV charging: https://witricity.com/media/blog

WiTricity is the pioneer in wireless charging for electric vehicles, leading the development and implementation of magnetic resonance technology across passenger and commercial vehicles alike. The company's products are backed by an extensive patent portfolio critical to ratified global EV wireless charging standards including SAE, ISO, and GB. Automakers and Tier 1 suppliers rely on WiTricity to help accelerate the adoption of EVs by eliminating the hassle of plug-in charging and setting the stage for future autonomy. Beyond EVs, WiTricity technology is indispensable to the wireless charging of all products, from consumer electronics to micro-mobility to robotics.