

Meet Your EV Consumer















Amy Barzdukas Chief Marketing Officer, WiTricity

Wireless charging is a feature consumers are willing to pay more for, and a feature they rate higher than any other premium feature. ??

Your Customers Are Waiting for Wireless Charging

At WiTricity, we're passionate about wireless charging to accelerate the adoption of Electric Vehicles. But it's not just us: consumers who love EVs want wireless charging, too. And they keep reaching out to us to tell us their stories. They're passionate about going green and sustainability, and they are passionate about technology. They're people who care deeply about what they drive and the whole ownership experience.

This is our second volume of EV owner profiles that provides insights into how EV owners feel about driving EVs, what led them to making an EV decision, and what they like (and don't like) about their EVs. Each personal story helps explain why, among U.S. drivers planning to buy an EV in the next two years, 96% find wireless EV charging appealing.

Like those consumers in our first volume of profiles, these consumers couldn't wait to tell us about their cars and their experiences. Drivers want everyone – particularly OEMs and Tier 1 providers – to know why they're so excited for wireless EV charging to be available on their next EV. In fact, it's a feature they are willing to pay more for, and a feature they rate higher than any other premium features like parking assist, self-driving capability, premium audio, and more.

¹ All statistics from research conducted by Qualtrics on behalf of WiTricity, spring 2022. What Will Accelerate EV Adoption • WiTricity



LEN NOWAK
Tucson, AZ
Kia EV6

Wireless charging is the next step in the EV revolution. It's neat and clean and does away with messy wires and plugs. ??

Wireless EV Charging is the Next Step in the EV Revolution

From the cold and snow of New Jersey to the desert heat and cactus of Arizona, Len Nowak has lived a life of extremes. He spent 43 years traveling the globe supporting worldwide pharmaceutical manufacturing and is now living the carefree life of a relaxed retiree in the Arizona high desert. Carefree and relaxed? Not Len! He's busier than ever as a brand ambassador for Aptera, a solar-powered three-wheel electric vehicle.

Len and his wife, Susan, enjoy their rural surroundings and primitive roads. But with rural living comes EV range anxiety. As they wait for their new Aptera, Len and Susan recently purchased a Kia EV 6 GT-Line. With an estimated range of 310 miles, it's enough to get them to their nearest big city, Tucson, and back – a 130-mile journey. This is much different from living in New Jersey where most of their driving was into New York City or their regular commute to the airport. "There aren't a lot of electric vehicles where we live but we like being pace setters and helping others see how easy they are to drive and maintain."

From a 1972 Nissan 240Z and Plymouth Barracuda to a Kia EV6 and Aptera, Len has come a long way in his automotive journey. "We wanted our next car to be an electric vehicle. But before deciding, we educated ourselves. I joined three electric vehicle associations to learn about charging, talked with members to get their take on vehicles, and test drove a few. One of our clubs has an Electric Vehicle Supply Equipment (EVSE) adoption program, where we donate a charger, or provide a grant for one, that we give to someone to install a charger, like a restaurant or hotel. It's a win for the establishment as it entices people to visit and it's a win for us as it's another installed charger that everyone can use."

Len Nowak (continued)

As mentioned earlier, Len is not a carefree kind of guy. But when it comes to wireless charging, "carefree" is the word that comes to mind. "Wireless charging is the next step in the EV revolution. It's neat and clean and does away with messy wires and plugs. I really like the idea of being able to simply drive over the charger and our car starting to charge. Incredibly convenient. Why shouldn't all EV charging be this way?"

As he enjoys his wife's Kia, Len's looking forward to the Aptera, which he expects to get next year. He's one of 700 volunteer ambassadors who promote the vehicle globally. Although he likes its affordability and efficiency, he's particularly excited about its extended range from the installed solar panels. "The only thing that will make the Aptera better is wireless charging."



I really like the idea of being able to simply drive over the charger and our car starting to charge. Incredibly convenient.
Why shouldn't all EV charging be this way?

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AUSTIN GUYNESS

Bakersfield, CA

No EV – yet

when I can simply park and begin charging. No need to plug in. No need to remember. It'll be so easy. ??

Wireless EV Charging Makes it All Possible

Solar power is more affordable, accessible, and prevalent in the United States than ever before. From just 0.34 GW in 2008, U.S. solar power capacity has grown to more than 121 gigawatts of solar capacity installed nationwide, enough to power 23.3 million homes. Globally, solar is expected to account for 60% of the increase in global renewal capacity in 2022, taking the global total to more than 300 gigawatts.

As a player in the solar industry, 50/50 Clean Energy is an electrical contracting business that's focused on residential and commercial property owners interested in switching to solar by installing solar panels, EV chargers, and battery storage units. Company owner and electrical contractor Austin Guyness foresees a future that doesn't stop with solar power. "I see a future that includes wireless charging. Dealing with solar energy and chargers every day, we're experiencing a revolution. Beyond what my customers are doing, I look to a future when I can fuel my vehicle with energy from the sun – wirelessly." Austin lives in Bakersfield, CA, so plentiful sunshine is a given.

Austin doesn't currently drive an electric vehicle but is approaching his EV future from an electrician's point of view. Unlike most consumers in the market, Austin is not influenced by the look of a vehicle or a brand name. He's more influenced by the vehicle's power and efficiency. "I spend time studying the technology, understanding the power grid, and looking at wires. There's really no need to have charging wires come into a vehicle. It's safer if they don't. And for convenience, wireless charging is the next wave in powering electric vehicles," Austin explains. "I can't wait for a time when I can simply park and begin charging. No need to plug in. No need to remember. It'll be so easy."

¹ https://www.seia.org/solar-industry-research-data

https://www.weforum.org/agenda/2022/06/state-of-renewable-energy-2022/#:~:text=Image%3A%20IEA-/Solar%20is%20expected%20to%20account%20for%2060%25%20of%20the%20increase,to%20more %20than%20300%20gigawatts.

Austin Guyness (continued)

Austin spends his days installing solar panels and talking about solar energy, but he can't wait for the time when we don't even have to touch the grid. "First, we remove the oil refineries from powering vehicles. Then we remove connecting to the electric grid. Power from the sun, directly to the charger ... that's our future." Taking electric vehicles one step further, Austin is excited about an autonomous future. "It won't be long until cars are fully autonomous. And, of course, a car isn't truly autonomous if someone has to plug it in to charge. With vehicles coordinated, autonomy will resolve so many traffic and environmental problems. Less accidents. Less waiting in traffic. Less frustration."

"Wireless makes it all possible," Austin quickly adds.



It won't be long until cars are fully autonomous. And, of course, a car isn't truly autonomous if someone has to plug it in to charge.

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Cardiff, CA
Tesla Model S

To be able to stay in my car while its charging and take off — if necessary — would be amazing. ??

The Road Less Traveled

It only takes a few minutes talking with Elaine Borseth, President of the Electric Vehicle Association, to know she loves cars. It's also clear why she's President of North America's leading volunteer organization that accelerates the adoption of electric vehicles. "I grew up in Detroit. My father loved cars. What made it fun – and interesting – is that he was always passionate about cars. He loved cars that got great gas mileage and I loved cars that went fast. This becomes quickly obvious as she begins to rattle them off ... Triumph TR6, Chevy Corvette, Mercedes convertible, and more. But her love of gas-powered cars quickly changed as soon as she drove her first electric vehicle.

"I thought I'd test drive a Tesla. For grins," Elaine laughs. Her response quickly picks up speed as she gets more excited describing her first test drive. "I was blown away by the performance! I didn't care if it was electric. It could have burned rocket fuel for all that matters. I just loved the performance." She then took time to learn more about the car she drove and was thrilled to learn that that she'd no longer have to go to a gas station. "I'm that person who always drove with the gas light on." As a practicing chiropractor in San Diego prior to retiring, Elaine drove 50 miles to work and back every day. "I knew I needed to stop and get gas on my way home, but it would be late and I'd be tired so I'd wait until tomorrow. Sometimes tomorrow was too late." Elaine loves that, with an electric vehicle, she wakes up every day to a fully charged vehicle.

Something else Elaine loves is road trips. The kind of road trips that would amaze most EV drivers. One week after her retirement in 2015, Elaine hit the road ... cross country. She then described her latest adventure. "I recently returned from a two-and-a-halfmonth 10,000-mile road trip to North Dakota, Michigan, Canada, New England, and back to California." But that was nothing compared to her trip a few years ago – four months and 16,000 miles to the Florida Keys, upstate New York, the Midwest, Yellowstone, Glacier, Banff and across Canada, and back down through Washington and Oregon. "Now that was a trip!"

Elaine Borseth (continued)

Like many EV drivers, Elaine was initially concerned about range anxiety. "I've charged everywhere – campgrounds, motels, convenience stores ... you name it. I don't usually plan ahead unless I'm going somewhere off the grid." But wherever she is, Elaine loves to patronize places that have charging. "With 400 miles of range and overnight chargers, I don't have to stop and charge much, if at all during the day. In fact, my 10,000-mile road trip cost only \$300 in electricity thanks to free destination charging."

With all her driving – and charging – Elaine is enthusiastic about wireless charging. "It's the coolest thing ever! How nice it will be to just pull up and not have to worry about plugging in. Imagine not having to even think about charging. Totally convenient. And so much safer. Most of my road trips are by myself and I've had to charge in a few questionable places. Granted, I'm a night person but I don't enjoy having to get out of my car at midnight to charge it. The chargers are usually in back lots, behind buildings, or by a loading zone. Definitely sketchy. To be able to stay in my car while its charging and take off – if necessary – would be amazing."

"I've driven many different EVs – from a Leaf and Bolt to Rivian, Taycan, and VW ID.4. Wireless charging on all these cars – plus my Tesla – will be a true game changer. I can't wait."

We can't either, Elaine.



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KRISTEN LEE New York, NY Tests EVs

For safety and security, alone, wireless charging is a better experience than plugging in. ??

Porsche Taycan, Rivian R1T, Nissan Leaf: Wireless EV Charging Benefits All

"I was visiting my parents and needed to charge a Porsche Taycan," explained Kristen Lee, Deputy editor of <u>The Drive</u>. "My parents don't have a home charger, so I went to the app, found a charger, and drove to the local mall. Unfortunately, it was super dark and the location looked very shady. I didn't feel safe charging there." As a result of that experience, Kristen put a call out to social media to see how others feel about EV charging; she was stunned by the responses she received from both men and women who have faced the same situation. Overwhelmingly, people won't use chargers if it's not in a safe location.

When told about wireless charging, Kristen's sigh of relief said it all. "Really?" More about that after we get to know about Kristen's EV journey and why she was driving a Porsche Taycan.

Kristen has the unique opportunity to marry her two passions – writing and cars – as Deputy Editor of The Drive. "I've been interested in cars since I was 10 years old," Kristen related. "The Drive is my dream job. We're an automotive news and culture site so it's not just car reviews and industry information. We work to create a unique voice and report on what others don't. And I get to test cars. It doesn't get better than that."

With EV test drives comes public charging. Not always a great experience. "I was charging a Rivian R1T in upstate New York. I located a fast charger outside a nearby hotel. Like many other chargers it was behind the building in a not-so-safe location. If it had been the middle of the night, I definitely would have passed. Why can't chargers be in safe, well-lit locations? And why are there so many plug-in chargers that just don't work? It's very frustrating."

Kristen Lee (continued)

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Back to the Taycan ... yes, it was a test drive. "The Taycan is a very nice car, but I really like the Nissan Leaf. It's comfortable, fits well in city traffic, and is quiet and comfortable." What's the one thing that would make the EV experience better? Wireless charging. "For safety and security, alone, wireless charging is a better experience than plugging in," Kristen commented. "But for so many other reasons, as well. Less moving parts so less chance of vandalism. Not having to get out of the car to charge in bad weather. Easier accessibility for disabled people. Just pulling up to park and charge is so much easier."

Totally agree, Kristen!



Just pulling up to park and charge is so much easier.

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MATTHEW GILLIAN
Fresno, CA
VW ID.3

Not only is [wireless charging] less prone to vandalism, it's safer and much more convenient than plug-in charging. ??

A Renaissance Man Embraces EV Wireless Charging

From theatre and music to green technology and micro transportation, Matthew Gillian is a true Renaissance Man. Defined as "a person who has wide interests and many areas of knowledge," Renaissance men, like Matthew, are making differences in their community. After 10 years in the music industry, Matthew's interest in green technology led him to create Inspiration Transportation, which aims to provide Fresno, California's most under-served families and individuals access to transportation services.

After the birth of his son, Matthew recognized that his work in the music industry wasn't allowing him to nurture his son properly. He began to look for new opportunities while driving for Uber and Lyft. That's when the lightbulb went off: he realized he could provide personal transportation for those in need while giving him the time needed with his son. "I learned that people weren't going to doctor appointments because they didn't have transportation alternatives. Or they'd arrange for transportation, and no one would show up. I needed to find a solution for this forgotten part of the community," Matthew explained. "My company allows people in low income and rural communities to make a reservation and know the cost – before the trip. And because it's with a small company, they know the drivers and develop a relationship with them. They also know we'll show up when we say we will."

Matthew had a nurturing family that provided him the opportunity to experience culture, technology, and creative opportunities. Wanting to pass these opportunities along to his son, he created a business that's turning his dreams into reality – hoping his actions will inspire his son. "I started from the ground up running my business out of my car. And since my car was my office, it needed to provide everything an office can provide. I decided to go with an EV, so I could work while I charged. It also allowed me to go beyond the antiquated model of paying for gas. Why do that when you can plug in?"

Matthew Gillian (continued)

As someone who looks beyond antiquated models, Matthew is excited about wireless charging. "I'm always looking forward and thinking, 'what can we do tomorrow that we're not doing today?' Plug-in charging is not the future. With vandalism being such a large problem in Fresno – causing the city to hold back on implementing plug-in chargers – wireless charging is a great alternative. Not only is it less prone to vandalism, it's safer and much more convenient than plug-in charging."

Matthew is someone who "puts money where his mouth is." As a partner in the city's new City Center, he is responsible for ensuring EV owners will have the ability to charge while visiting the new facility next year. City Center is a 9-acre campus that will include over 160,000 square feet of buildings serving as a onestop shop to provide people with a pathway out of crisis through a front door. As a shared campus, it will bring together more than 20 different organizations all focused on meeting people's emergency needs. "The City Center project is an opportunity for partnership and collaboration, and for us to show that we are forward thinking here in the city of Fresno. I'm hopeful that being forward-thinking continues to permeate typical bureaucracy that we've seen here for decades."

Wireless charging is definitely forward thinking.



I'm always looking forward and thinking, 'what can we do tomorrow that we're not doing today?'
Plug-in charging is not the future.

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TIM PEACOCK AND
DAVID TILLSON
San Diego, CA
Tesla Model 3 and Kia Niro

The Tesla is cool,
but I still have to
remember to plug it in.
I love the idea of not
having to consciously
plug it in. ??

Wireless Electric Vehicle Charging ... Magically Convenient

What do children, the great outdoors, electric vehicles, and a digital marketing agency have in common? Not much. That is, until you meet Tim Peacock and David Tillson, principals of VSSL, an agency based out of San Diego, California. Together, Tim and David have built a nationally recognized agency while raising active families. And all while driving electric vehicles.

Tim and David met while working at Science Applications International Corporation (SAIC). When SAIC made the decision to relocate its headquarters from San Diego to the Washington, DC area the perfect opportunity presented itself – start a new agency and build it from the ground up. Easier said than done. But with grit, determination, and creativity, Tim and David slowly grew their business while their children grew alongside. Throughout their journey, cars were the least of their interests. Neither are car buffs, and both tend to focus on family cars they can keep for a long time. In Tim's case, he holds onto cars for 10 years; David's 2000 Jeep kept him and his family going for 19 years. That's why it was a surprise to learn that both have electric vehicles.

"When it came time to get a new car, electric vehicles were just starting to become mainstream in Southern California," commented Tim. "I didn't want to deal with oil changes and lots of maintenance. But I also wanted something that would be fun to drive." Tim got a 2021 Tesla Model 3 as his commuter car, sitting alongside a Honda Pilot for longer family trips. When it came time for David to make a change, he initially considered a hybrid but eventually settled on a 2019 Kia Niro (while maintaining his GMC Suburban for roadtrips and towing boats). While Tim heads to the mountains and woods to escape, David prefers the open waters of the San Diego Bay and beyond. With large families and lots to tow, two-car families are the norm.

Tim Peacock and David Tillson (continued)

"Prior to the Kia, I remember when I'd get ready to drive the Jeep and realize it was out of gas. In a rush, I'd resort to the gas-guzzling Suburban," commented David. "There's a huge convenience factor when I think about wireless charging and simply pulling into the garage and the car begins charging. I know it'll be ready when I'm ready. You can't put a price tag on that." Tim quickly added, "The Tesla is cool, but I still have to remember to plug it in. I love the idea of not having to consciously plug it in. And, with my wife and I sharing the car, I know that whoever drove it last, the car will be ready to handle my daily commute the next day." David couldn't wait to get the last word in, "It's the obvious next step in EV charging. When was the last time you got up to change the channel on your TV? Or plugged in your electric toothbrush to charge? It's a no brainer."

"It's magical," said Tim. "Convenient," added David. "I'm excited for the day when I can be part of the WiTricity Halo beta test and have wireless charging in my garage." Not to be outmaneuvered by David, Tim insisted on the last word, "It's just going to make my EV experience better."

Wireless EV charging is magical. No need to plug in. Always ready to go with a full charge. Knowing it will be ready when you're ready. It simply makes the EV driving experience better.



I'm excited for the day when I can be part of the WiTricity Halo beta test and have wireless charging in my garage.

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TONY AND LAUREL SGRO
Orinda, CA
No EV — yet

convenience and cleanliness of not having to deal with cords. To be able to simply pull in and not have to plug it in?

That cinches it for me! 37

How EVs and Wireless Charging Can Add Convenience, Cleanliness, and Peace of Mind

After 40 years together, Tony and Laurel Sgro can nearly finish each other's sentences. But they don't! Having said that, there's certainly one area where they're totally in synch: sustainability and the environment. Outdoor living is in their blood and keeps them very attuned to Mother Nature - what she provides and what we're taking away. Currently living in the Bay area, they're also very aware of the need for transportation that's clean, safe, and convenient.

In 1990, Tony and Laurel established EdVenture Partners (EVP), which builds academic partnerships to address social impact, marketing communications, sales, and other business-related challenges for Fortune 500s, governments, and trade associations. Having partnered with nearly 1,000 academic institutions in 76 countries worldwide, EVP has enabled 300,000 students to participate in peer-to-peer, experiential learning programs. One of their first clients was General Motors, and since then, EVP has helped eight other automotive brands understand the youth market. "We have gasoline running in our veins," Tony quipped. Throughout its 30-year history, EVP has always been a virtual company. As a result, Tony and Laurel have not need a vehicle for commuting. But they do need cars for daily living and heading into remote areas for hiking, biking, fishing, and communing with nature.

Tony and Laurel Sgro (continued)

They're both in sync in terms of their next car being electric. And although they're not aligned as to what that next car will be, they are in synch when it comes to wireless charging. "Wireless is a fabulous concept," commented Laurel. "I really like the convenience and cleanliness of not having to deal with cords. To be able to simply pull in and not have to plug it in? That cinches it for me!"

Reinforcing Laurel's comment, Tony said, "As we move down the EV path, one of the biggest complaints is charging station vandalism. With no moving parts, wireless charging provides one less opportunity for vandalism and more opportunity to always be working." Continuing he said, "I'd hate to be out in a remote area after fly fishing needing to charge and the only charger is broken. Wireless charging gives me peace of mind." Laurel quickly added, "It also provides peace of mind from a safety aspect. The last thing I want to do in a remote area is get out of my car and plug in a charger. With wireless charging, I simply park and charge."

Convenience, cleanliness, and peace of mind. Three good reasons wireless charging is charging our EV future. Oh ... and safety too!



The last thing I want to do in a remote area is get out of my car and plug in a charger. With wireless charging, I simply park and charge.

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ANDREW LIPP Calgary, Canada No EV – yet

l'm not keen on plugging my car directly into a power source. Wireless charging is much safer. 99

Wireless EV Charging: Worth Double the Price of a Plug-in Charger

Calgary – nicknamed "Cowtown" – is Canada's largest producer of natural gas and oil, but the energy section that represents a significant portion of Calgary industries also includes many clean technologies. Solar, wind, bioenergy, and geothermal all contribute to the lifeblood of the cosmopolitan city that's home to more than a million people. Andrew Lipp saw the burgeoning growth of solar energy and quickly moved his electrical contracting business in that direction. And, as customers install solar panels on their homes, more and more are asking for those panels to be able to support chargers for electric vehicles.

"Solar – and other technologies – are fueling our future. I saw this area of business growing and I wanted to be part of that future," Andrew explained. As more of his customers want EV chargers installed in their homes, Andrew is at the forefront of the EV future. "I don't yet have an EV but it's in my plan. As I work on customers' homes and install chargers, I'm learning what works – and what doesn't." As more homeowners purchase EVs, Andrew has seen his customers spend 1/10th of what they used to spend on gasoline. For him, the cost savings on his work van, alone, would drop from \$75/week to \$30/week. "The savings of going from a gas engine to electric are real. The growth of EVs is creating an ongoing need for chargers throughout the province and, although Alberta is about 12 months behind the US in technology, chargers are becoming more readily available in Calgary. I can't wait for them to be everywhere."

Andrew Lipp (continued)

As Andrew plans for his EV purchase, he's already thinking about wireless charging. "I don't want to depend on things that depend on me. As owner of a business, I'm continually multi-tasking. Phone, estimates, orders ... you name it. It would be so easy to forget to charge. I don't want to start my workday by rushing to get a charge because I forgot to plug in. With wireless charging, I don't have to worry about it. The convenience factor alone is worth double the price of a plug-in charger."

Andrew also likes that wireless charging disconnects the point of use from the power source. "I'm not keen on plugging my car directly into a power source. Wireless charging is much safer. It also eliminates the vagrancy problem, which – unfortunately – is growing here. I look forward to the day when I don't have to go into my garage but, rather, simply pull up in front of my home and begin charging. I hate the idea of having to run cords across my yard. I would simply park. And charge."



I look forward to the day when I don't have to go into my garage but, rather, simply pull up in front of my home and begin charging.

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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

About WiTricity

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.







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