

7 out of 10 people don't know their electric car could power their home for two days

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Research from Europe's largest Vehicle-to-Grid pilot has revealed that 7 out of 10 people have never heard of V2G bidirectional charging technology – despite the fact that this breakthrough could allow them to use their electric car as a giant battery to power their entire home for two days and make significant savings on their energy bills.

The revelation comes from the groundbreaking PAVE (Implementation of Vehicle-To-Grid Services) project, where [Easee](#), the leading EV charging solutions provider, is contributing its V2G-ready bidirectional charging technology to transform how electric vehicles interact with the energy grid.

What most drivers don't realise is that their electric car represents a substantial untapped energy resource. With Easee's V2G-ready Max and Pro chargers, homeowners can implement smart charging strategies that could slash their energy bills. The system allows drivers to charge their vehicles using cheap off-peak electricity tariffs during the night, then seamlessly use this stored energy to power their homes during expensive peak rate periods – potentially saving hundreds of pounds annually.

“It's remarkable that such a game-changing technology remains virtually unknown,” said Anthony Fernandez, CEO at Easee. “When we tell people their car could power their home for two days, or that they could charge cheaply at night and avoid paying peak prices during the day, the reaction is always amazement. This is one of the biggest missed opportunities in home energy management – and pilots like PAVE are essential to show how it can become a reality at scale.”

The research findings are even more striking when examining experienced users. Only 16% of seasoned

EV drivers with over three years of ownership understand bidirectional charging concepts, demonstrating that even those most familiar with electric vehicles are unaware of this transformative capability.

The comprehensive Vinnova-funded initiative, launched in late 2023 with testing taking place in Gothenburg, Sweden, represents a critical step toward making V2G bidirectional charging technology a practical reality for European consumers. The two-year pilot project uniquely brings together partners from the entire electrical grid and charging ecosystem to develop scalable V2G solutions.

What makes the PAVE project exceptional is its unprecedented collaboration across the energy infrastructure ecosystem. The initiative includes Polestar providing V2G-capable Polestar 3 vehicles and developing Virtual Power Plant solutions for large fleet management, while Easee contributes its V2X-ready charging technology to enable seamless bidirectional energy flow.

Critical grid infrastructure partners include: Svenska Kraftnät (Swedish National Grid) exploring V2G's impact on ancillary service markets; Vattenfall Eldistribution investigating standardisation and grid-level effects; and Göteborg Energi Nät examining local grid capacity support and congestion management. Additionally, Chalmers University of Technology provides essential research on customer engagement and energy scheduling strategies.

The PAVE project demonstrates how V2G technology, enabled by Easee's advanced charging solutions, creates a sophisticated energy management system. During off-peak hours when electricity is cheapest, the smart charger automatically fills the car's battery. Then, when household energy demand peaks and grid electricity prices soar, the system seamlessly switches to use the car's stored energy to power the home.

PAVE is a project that combines convenience with the potential to transform the economics of home energy consumption. With the average UK household spending over £880 annually on electricity, smart V2G bidirectional charging could reduce these costs by up to 40% while providing complete energy independence during power outages.

Research conducted within the PAVE project, involving 563 Swedish drivers, revealed that solar panel owners represent the most promising early adopters for V2G technology. An impressive 65% of Swedish EV pioneers already have solar installations, creating the perfect ecosystem for maximum energy cost savings.

For solar and storage-equipped homes, V2G bidirectional charging technology creates a triple benefit: free solar charging during the day, cheap grid charging during off-peak hours, and the potential to sell stored energy back to the grid during peak demand periods.

"The insights from PAVE show that successful bidirectional charging deployment requires technology that works intuitively from day one," added Fernandez. "Our Max and Pro chargers are designed to make this revolutionary capability as simple as plugging in your phone – but with the potential to transform your entire household energy strategy."

As the project continues through 2025 and beyond, the PAVE consortium expects to deliver practical solutions that will finally unlock the massive potential sitting unused in driveways across Europe, turning every electric car into a smart energy asset for its owner.