

Tap Your EV Battery For More

You may have seen TV commercials where an electric vehicle (EV) is used for driving power tools or even powering a house during an outage. You might ask yourself, is that for real?

Absolutely! Modern EVs have battery capacities of 40, 60 or even over 100 kilowatt hours which are used to give EVs their long range.

That energy can also be used to power other electric devices or your home. Known as vehicle to grid (V2G), vehicle to building (V2B) or vehicle to load (V2L), it's even sometimes referred to as V2X: Vehicle to everything.

Vehicle to Load

Vehicle to load (V2L) technology is an innovative concept that allows EVs to act as a portable power source for various types of loads. This is done by using the battery of the EV to supply power to external devices, such as tools or equipment, through a V2L connector.

One of the main benefits of V2L technology is that it allows EV owners to use their vehicles as a source of backup power in case of an emergency. For example, if a storm knocks out power to a home or a business, an EV equipped with V2L technology can be used to power essential devices, such as lights and refrigerators.

V2L technology also has the potential to make EVs more versatile and useful for a wider range of consumers. For example, tradespeople who rely on power tools can use V2L to power their equipment directly from their EV, eliminating the need for a separate generator. Similarly, campers and tailgaters can use V2L to power lights, electric coolers, grills, space heater, fans, and other devices while they're on the road.

Some vehicles like the Ford F150 Lightning and the Rivian R1T come with 120V outlets that you can use to directly power devices. Some other vehicles like the Kia EV6 and Hyundai Ioniq5 have an available accessory that plugs into the charging port and has a 120V outlet to power household devices.

At a recent Consumers Energy customer outreach event, we demonstrated V2C technology: Vehicle to Coffee. Using the Kia EV6's V2L adapter, we ran a coffee maker using the energy in the car's battery.



One major benefit of using an EV to power devices over a generator is that there are no exhaust fumes associated with the power transfer. Therefore, a battery electric vehicle with this capability can be parked in an enclosed space like a garage without concerns about emissions like carbon dioxide. As always, follow manufacturers' safety precautions and recommendations before using any such technology.

Despite the many potential benefits of V2L technology, there are still some challenges that need to be overcome before it can be widely adopted. One of the biggest challenges is the lack of standardization across different EV models, which can make it difficult for V2L equipment to be used with all types of vehicles.

Final Thoughts

EV batteries hold a lot of energy and we're just beginning to explore the practical uses for that energy. From tailgating to power tool usage in the field to home backup power, watch this space to see how EVs are more than just transportation.