

PRESS INFORMATION

Sono Motors – Solar On Every Vehicle

The Company

Munich, July 2022 – Sono Motors, founded in 2016, is on a pioneering mission to accelerate the revolution of mobility by making every vehicle solar. Its disruptive solar technology has been developed to enable seamless integration into all types of vehicles to reduce the impact of CO2 emissions and pave the way for climate-friendly mobility.

Today, the Company prides itself on having an experienced and rapidly growing team of engineers, designers and technicians who are developing and building a forward-looking electric car that is suitable for daily use, with integrated solar cells and innovative mobility services. The Sion - an affordable, solar integrated electric vehicle that facilitates community-sharing for the masses.

As an independent part of the business model, Sono Motors' proprietary solar technology is also being integrated into vehicles from other manufacturers, such as buses, trailers, trucks, camper vans, and boats. It provides power for a variety of vehicle systems, reducing CO2 emissions and fuel consumption.

Starting as a project in a small garage, Sono Motors has become a publicly-traded company within five years. In November 2021 Sono Motors started trading on the US technology exchange Nasdaq in New York City under the ticker symbol "SEV". The Munich-based company has grown exponentially, with a force of over 400 strong, made up of global talent and experts in their respective fields. This alongside, amongst other things, the announcement of over 20,000 reservations for the Sion, is enabling the company to further its vision. This number is a sign for the entire automotive industry of the growing interest and commitment in environmental preservation for everyday vehicle consumers.

The company's strong Community also sets a new standard of interaction between consumers and businesses. Since the very beginning, the Sono Motors Community has played a very important part in shaping the business.



The Sion

The Sion is an affordable solar integrated electric vehicle that facilitates community-sharing for the masses – something that appeals to all and subverts certain norms of technological innovation, which are often unavailable to everyday consumers. Through the Sion, Sono Motors intends to blend disruptive technology with affordability to enable individual contribution to global sustainability.

The Sion itself offers 120 kW (163 h.p.). In connection with a single-speed transmission and front-wheel drive, the three-phase synchronous motor ensures speeds of up to 140 km/h. The interior boasts space for up to 5 people as well as a capacious trunk (a trunk volume of 650 liters, over 1,200 liters when the rear seats are folded). The Sion's new LFP (lithium iron phosphate) battery has a capacity of 54 kWh, providing a battery range of up to 305 kilometers or 190 miles. The LFP battery is considered to be one of the safest on the market, and also completely dispenses with the use of cobalt, nickel and manganese.

The Sono Solar technology replaces traditional paint with proprietary integrated solar panels that can form to various applications. The Sion's solar panels, which are composed of 456 seamlessly integrated half cells, can add 112 km or 70 mi on average (up to 245 km or 152 mi) of additional driving range per week to the car's battery. The bidirectional charging functionality also enables not only the drawing of energy and storage of energy, but also the possibility to share it and power or charge electronic devices (with up to 3.7 kW using a Schuko household plug) or other electric vehicles (with up to 11kW). A bidirectional AC wall box enables the Sion to be used as a mobile power plant and also to feed stored electricity either back into their house or into the grid itself.

The Sion is expected to have the lowest TCO (total cost of ownership) in its category at the commencement of production, scheduled for the first half of 2023. Production of the Sion will take place in Uusikaupunki, Finland, in cooperation with partner Valmet Automotive. The contract manufacturer, with long experience in production for premium OEMs, will provide production capacity for 257,000 cars within 7 years.



Another important aspect of bringing the Sion to the streets comes in the form of the company's collaboration with the Fraunhofer Institute for Solar Energy Systems ISE. The aim of the partnership is to test and certify an innovative technology for integrating solar cells into the bodywork of electric vehicles as well as to identify other potential areas of application for certification. The partnership involves the comprehensive testing and approval process of Sono Motors' patented solar technology, with particular focus on producing evidence of the technology's safety and reliability.

The work done by Sono Digital also plays a huge role in enabling the company's vision in the field of shared mobility. For Sono Motors, leveraging digital solutions to increase the utilization and utility of the Sion involves three main aspects - Car sharing, Ride Pooling and Power Sharing. These are to be enabled in two main ways - via the on-board infotainment system and the accompanying Sono app. The Sono app will provide the aforementioned solutions as well as provide the car owner with all up-to-date information on important aspects of the vehicle such as state of charge, solar charging and usage statistics, amongst other things. It will also allow the utilization of the bidirectional charging system which enables the user to share charge stored within the Sion with other electronic devices or vehicles. The Sion's in-built infotainment system allows the passengers to use these services as well as control interior aspects of the car, such as ambient lighting and temperature control.

The Sono app is available in the Apple App Store and on Google Play and can already be used to share private cars of all manufacturers within a selected community. Sono Motors offers seamless payment processing and straightforward insurance coverage.

Sono Motors Sion – Tech Specs

- The LFP battery gives the Sion a capacity of 54 kWh - sufficient to a range of up to 305 km in accordance with the WLTP standard - and provides a maximum charging capacity of up to 75 kW (DC) and 11 kW (AC)
- The three-phase synchronous motor offers 120 kW (163 h.p.) in connection with a single-speed transmission. This enables speeds of up to 140 km/h



- The integrated body PV panels mean that the Sion's range can be extended by 112 km or 70 mi on average (up to 245 km or 152 mi) per week
- Its bidirectional charging capabilities also enable to power other electronic devices up to 3.7 kW as well as other electric cars up to 11 kW
- The Sono wall box allows the Sion to be used as a mobile power plant, either feeding stored electricity into a house or into the grid itself.
- The accompanying Sono App offers a wide range of services at the touch of a screen, such as Car Sharing, Ride Pooling, and Power Sharing
- Measurement specifications include a total length of 4,470 mm; total width of 2,080 mm; a trunk volume of 650 liters (over 1,200 with seats folded); and a total height of 1,660 mm
- The Sion purchase price, incl. German VAT, is €29,900

Unique Technology

Sono Motors seeks to enable resource-saving mobility through all forms of transport, not only through the Sion. Therefore, it announced at CES 2021 its intention to license its unique solar technology to other companies.

Since then, Sono Motors has already signed more than 22 LOIs and contracts with companies such as MAN, Chereau, ARI Motors, and Münchner Verkehrsgesellschaft (MVG). The complete solution offering from Sono Solar includes a customized concept including solar modules, power electronics, telematics and data, mechanical and electrical integration as well as after-sales and service. The technology is suitable for integration into existing vehicles as well as production-ready development and integration into new vehicles during the production phase.

One such collaboration was recently announced with MAN Truck & Bus, one of the leading international providers of commercial vehicles. The two companies signed a Letter of Intent, whereby they agreed to jointly investigate the technological and economic feasibility of integrating the Sono Solar technology into MAN's eTGE electric transporter.



Sono Motors will also offer a complete and efficient retrofit solution, the 'Solar Bus Kit', for bus fleet operators who have a compelling need to reduce diesel consumption and CO2 emissions to meet their sustainability goals. The Solar Bus Kit allows subsystems like the HVAC to be partially powered by renewable energy thereby saving fuel, CO2, and costs. The Kit can save up to 1,500 liters of diesel and up to 4 tonnes of CO2 per bus per year from the ~1.4 kW peak installation with a total size of about 8 square-meters of solar panels. Bus fleet operators stand to see a potential payback time of approximately 3-4 years, depending on days in operation and fuel prices.

The company additionally premiered the use of its proprietary solar technology for public transport in partnership with the Münchner Verkehrsgesellschaft (Munich Transport Company, MVG). The novel solar bus trailer will hit the roads in the Munich metropolitan area in the near future, testing the energy yields as well as the potential of the technology in daily operation. This could save up to 2,500 liters of diesel per year, which translates into an annual local CO2 savings potential of more than 6.5 tonnes per bus.

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