

Press release

The first 100% self-powered campervan embarks on its Swiss tour on June 14

- Soleva, the 100% solar-powered campervan, kicks off its tour of Switzerland on June 14, 2024. Its mission? To showcase its capabilities and promote sustainable mobility to a broad audience.
- Equipped with advanced solar panels from CSEM, the Swiss technology innovation center, Soleva can meet all its energy needs and charge up to 150 kilometers per day. Thanks to its batteries and motor, it boasts an impressive autonomy of nearly 250 kilometers.
- Led by a team of young Swiss engineers, this project represents a pivotal step in the adoption of soft mobility. The campervan's conversion has reduced its carbon footprint by 80% compared to traditional vehicles, but it is still practical, attractive, and affordable.

Neuchâtel, June 12, 2024 – Soleva, the campervan powered by 100% self-produced solar energy, is gearing up to hit the road on June 14, 2024 for a tour of Switzerland. This innovative campervan, equipped with CSEM's advanced lightweight solar panel technology, will traverse more than 100 municipalities, making key stops in cities such as Lausanne, Zurich, Davos, Lugano, and Sion.

100% solar-powered tour of Switzerland: A crazy idea conceived by five alumni from EPFL

Back in 2021, Curdin Wüthrich, an engineer with a passion for soft mobility and four of his friends embarked on an audacious challenge: to transform a 1987 campervan, originally running on diesel, into a 100% clean vehicle. To achieve this, the campervan would have to be powered solely by the sun. Freshly graduated from EPFL, they founded the association Soleva and embarked on this adventure. Three years later, their gamble paid off. The campervan has retained its vibrant summer colors, but its internal combustion engine has been replaced by an electric motor and batteries. Additionally, a deployable solar installation on the roof allows it to run and operate entirely on solar energy. The interior has also benefited from a 100% eco-friendly makeover. Fitted with recycled, local, and sustainable materials, it can accommodate three berths, a kitchen space, and a bathroom.

"This project was not only a technical feat, but is also an inspiring illustration of what passion, innovation and determination can achieve," explains Curdin Wüthrich, Co-Founder and CEO of Soleva.

CSEM, a key photovoltaic partner

The technological heart of the Soleva campervan lies in its high-performance solar panels. Developed by CSEM in collaboration with the EPFL's PV-Lab, these lightweight panels are adjustable, optimizing energy production throughout the day. Thanks to this technology, the panels can meet all of the vehicle's energy needs and recharge up to 150 kilometers per day, with a total range of almost 250 km offered by the batteries and motor.

The conversion and electrification of the campervan posed significant challenges, especially due to Switzerland's strict legal certification requirements and the technical complexity of the system.

Matthieu, Group Leader Solar Modules at CSEM: “Projects like Soleva provide us with the opportunity to test and improve the application of our lightweight panels for mobility and mobile electric stations.”

Antonin, Focus Area Manager for Integrated and Lightweight PV Modules at CSEM and Team Leader at the EPFL’s PV-Lab: “CSEM and the PV-Lab are delighted to have contributed to the Soleva project, particularly by adding 1350 watts of solar power based on resilient, hail-resistant, lightweight photovoltaic module technology.”

A decisive step towards low-carbon mobility

This Swiss tour marks the beginning of a crucial test phase to evaluate the prototype's performance. The lessons learned from this adventure will inform future concept improvements and explore partnership opportunities for future industrialization. Soleva aims to convert more utility and professional transport vehicles, contributing to a more sustainable, environmentally friendly mobility landscape.

“Our partnership with CSEM has been essential in making the Soleva campervan a concrete example of what sustainable mobility can achieve through advanced and innovative technological solutions,” states Tobia Wyss, Solar Integration Manager at Soleva.



Presentation of the Soleva campervan at the "PV in Motion 2024" conference, organized by CSEM.

Further information

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About Soleva – The 100% Autonomous campervan

Soleva is a pilot project aimed at promoting the transition to renewable energies by building the most sustainable travel vehicle to date. To achieve this, a team of young enthusiasts took a 36-year-old van and converted it into a 100% electric vehicle. Thanks to a deployable and innovative solar installation, the vehicle is capable of driving solely on solar energy. The eco-friendly living concept uses natural or recycled materials to promote self-sufficiency and a circular economy. This summer, this prototype campervan will tour Switzerland, participating in numerous events and visiting schools to raise awareness about the environmental impacts of mobility and travel.

www.soleva.org

About CSEM – Energy harvesting for next-generation applications

CSEM is a non-profit-oriented public-private Swiss technology innovation center renowned for developing advanced technologies with profound societal impact. Our mission is to transfer these innovations to industries, strengthening the economy. We create energy harvesting solutions for IoT products, sensors, and customized photovoltaic (PV) applications like BIPV and AgriPV. With a cutting-edge infrastructure, we develop thin-film and crystalline solar cells and offer advanced encapsulation, polymer solutions, and innovative PV module stacks. From wearable to mobile and automotive applications, we optimize power-to-weight ratios, robustness, and reliability in extreme environments. Supported by a strong technical team and with access to interdisciplinary knowledge we are driving energy innovation for a sustainable future. www.csem.ch/en/technical-focus/integrated-lightweight-photovoltaics

