

EBike2Grid

Our efficient charging solution integrates Ebike-Batteries in MicroPV systems and hereby allows private households to participate in the decarbonization of our energy system while generating financial profit.

The Project

- **Problem:** insecurity of (future) electricity tariff and high electricity cost, fluctuation of available solar energy and mismatch of load, no accessible area for roof top PV systems installation
- Our charging **solution**
 - offers by load shifting a higher self consumption through the usage of our innovative EBike-Battery storage
 - in the "second-use" application the battery can be used as energy storage and is due to our smart energy management still available for planed and spontaneous EBike tours.
 - the smart energy management and the controlled charging and discharging currents are monitored and have no negative impact on the battery lifetime
 - in the "second-life" application the usage of old batteries will be considered before these batteries enter a complex recycling process (end of life)
 - allows the customer to participate in the energy transition, generate and store their own clean energy while saving money
- Targeted Market: Apartment households
- Fraunhofer technology: Compact efficient electronics circuit

The Team

Location: Fraunhofer ISE, Freiburg

Members: Cornelius Armbruster, Akshay Mahajan

AHEAD Infos Batch:

Phase: 1

Track: Spin-off

The Business Model

Unique Selling Proposition:

- offers by load shifting a higher self consumption through the usage of our innovative EBike-Battery storage
- low investment demand and short amortization time can be reached by the double use of the EBike batteries in the microPV system

Unfair Advantage:

- sustainable storage solution
- efficient power electronics
- low invest cost - due to double usage of EBike batteries

Revenue Model: Production sales

Venture Readiness Level



Technology Readiness Level



The Side Facts

Customer Focus: B2C

Searching For: Expert interview partner, investors, mentors

Industry Tags: Technology hardware and equipment

Technology Tags: Clean tech, energy harvesting