Solar Mobility

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Solar Mobility

E-motion

E-motion >> electric motion

S-class
Solar Mobility

- E-motion >> electric motion
- S-class >> solar class

Solar Mobility

1. The development of “Solar Mobility”
2. Energy for “Solar Mobility”
3. Vehicles and components
4. The future
Energy for solar mobility

• Solar electric vehicles
  • main vehicle components: body, drive system, batteries, control system
  • solar mobility
    • on land (cars, scooters, bikes)
    • water (solar boats)
    • in the air (solar planes, first planes available)

Energy for solar vehicles

• energy from „clean“ sources: solar, wind, hydro-power etc.
• „clean“ energy sources make the electric vehicle a real „zero emission vehicle“
• energy consumption low - typically from 5 to 20 kWh per 100 km
• solar generator (photovoltaic) either on top of the vehicle or external
• solar supply to the car through the so-called „solar grid system“
• Park & Charge system of public charging stations for electric vehicles

Solar vehicles with built-in solar modules

3,3 kW solar generator in Erlangen, Germany
The electric vehicle uses the solar grid system. In combination with a grid-connected solar power system, the electric vehicle can be used for driving. An electric vehicle can be charged with solar power even without a solar generator on site. For small vehicles, a 1 kW solar generator can provide sufficient energy for 10,000 km per year.

**Park & Charge station for electric vehicles**

**Park & Charge station in Bielefeld, Germany**
Citroën SAXO electrique

Citroën Berlingo electrique

City-El - single seater made in Germany

City-El - version "TARGA-FUN"
TWIKE, two-seater hybrid, made in Germany

The new REVA - made in Bangalore, India

Helektra TownLife (made in Italy)

KEWET (before: Denmark, now: Norway)
Vectrix scooter (USA)

- electric drive system
- hydrogen/fuel cell energy supply

helio

swizzbee powerbike

MZ - Charly - Germany
Two examples of electric vehicles for public transport

Electric bus in China - powered by Li-batteries (ThunderSky)

Velotaxi - a new concept

Three different Lithium battery technologies

The size of lead acid batteries compared to ThunderSky Lithium batteries

Concept cars with lithium batteries, USA

T-Zero
Volvo
Venturi

Solar ship „Heidelberg“ - Kopf Solar-Design, Germany
Solar pavillon in Berlin-Köpenick, Germany

Mini solar rail (Internet: www.solarbahn.de)

“My” solar cars