Solar Mobility

Environment 2005

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Solar Mobility

E-motion

Solar Mobility

E-motion >> electric motion

Solar Mobility

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

Solar racing vehicles




Solar vehicles prototypes





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)

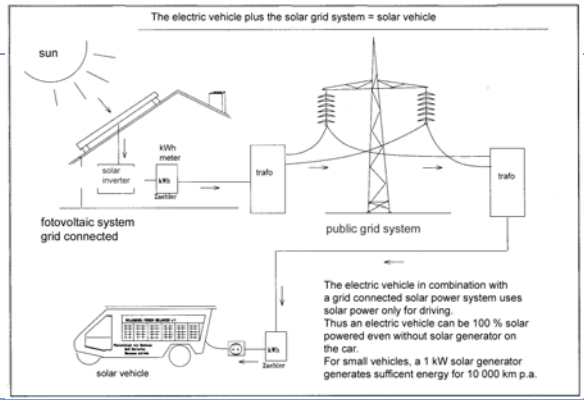
Energy for solar mobility

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



Park & Charge station for electric vehicles

Park & Charge station

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)

MEGA - mini lorry - made in France by Aixam

> Châssis cabine

> Plateau ridelles

Electric Porter, made by Piaggio / Daihatsu

Electric-powered Porter

PIAGGIO
LIGHT TRANSPORTATION VEHICLES

ATW - Trans (made in France)

Arrow 45

Peugeot electric scooter „Scootelec“

EVT Roller 4000 und 168

E-TON scooter, made in China

e-max scooter, made in China

Vectrix scooter (USA)



Vectrix scooter -
- electric drive system
- hydrogen/fuel cell energy supply

helio

swizzbee powerbike

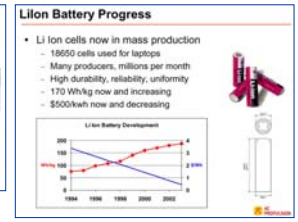
MZ - Charly - Germany

Two examples of electric vehicles for public transport

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

Velotaxi - a new concept

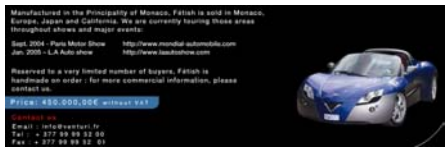
Three different Lithium battery technologies



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