

Electro-mobility as means against Climate Change in German Cities

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Arguments for a change

Arguments for a change:

- Pollution, CO2 emission, climate change
- Preparing for post oil mobility
- No sufficient contribution of traffic to prevent climate change up to now
- Alternatives?

CONCEPT OF URBAN MOBILITY

Environmental quality

Reduce air pollution and noise



Quality of public spaces

Less cars - more space for people



Quality of mobility

Offer mobility for all

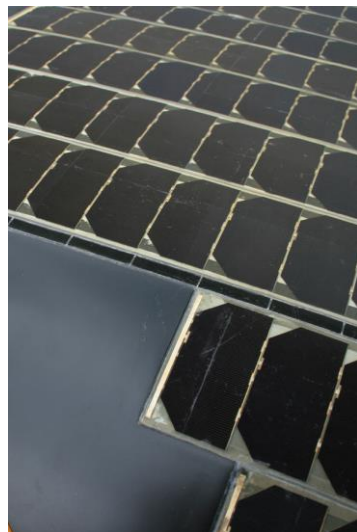


How to address climate goals in traffic / alternatives

- limits for CO2 emission for car producer (combustion engines, diesel and gasoline motors)
- promote electric cars
- Change drive mode: bioethanol, natural gas (NGL), liquefied petroleum gas (LPG), fuel cell etc.
- Problems/Barriers:
 - traffic growth (1,2 % more vehicles per year, more traffic performance, km/person)
 - low oil price
 - Estimated growth for transport of goods on German highways: 30 % till 2030
- Result: Not many alternatives

How to get run electro-mobility?

- First step: Development of vehicles and charging infrastructure
- Second step: Testing in the urban lab
- Third step: Run-up market
- Fourth step: Self-sustained market



Many show case projects

- Show cases in German towns and regions
- Cities like Berlin, Stuttgart or Leipzig built up electric fleets for car sharing, taxi or municipal cars



New mobility solution with electric vehicles

Fotos: E-Taxi in Stuttgart, Projekt GÜest, Federal Showcase project Dresden, Teilauto Carsharing with E-cars, Association for Carsharing Germany
E-Bus and Pantograph for charging in the City of Hamburg



Public transport as part of electro-mobility solutions



Foto/Graphik: © E-Mobil BW

Environmental friendly = public transport!



(c) Jan Bartelsen



Fotos: Tram, Bus, Train in Berlin, Tram in Dresden, E-Bus Emil, City of Braunschweig

National e-mobility objectives

National Objective in Germany:
2 Mio. electric vehicles in 2020,
but statistics (01-01-2017):

- 62,2 Mio. vehicles total
- 684 vehicles per 1.000 person total
- 34.000 full electric cars
- 165.000 hybrid cars

Government declared in May 2017:

Goal for electric vehicles will not be reached! Challenge to reach the goal at its best!

Electric bikes: Since 2009 more than 3 Mio. E bikes sold without any subsidies, 2016: 600.000 sold

State financial support

- 1,2 Billion Euro buyers support up to
 - 4.000 Euro for full electric car
 - 3.000 Euro for hybrid car
 - car basic price not over 60.000 Euro
 - bought after July 2016
 - owner has to stay at least 6 month with the car
- 300 Mio. Euro on charging points
- subsidies for electric fleets
- subsidies for electric busses
- state guidelines to encourage the use of electric vehicles
 - federal climate change initiative
 - electric initiative of federal ministry for traffic



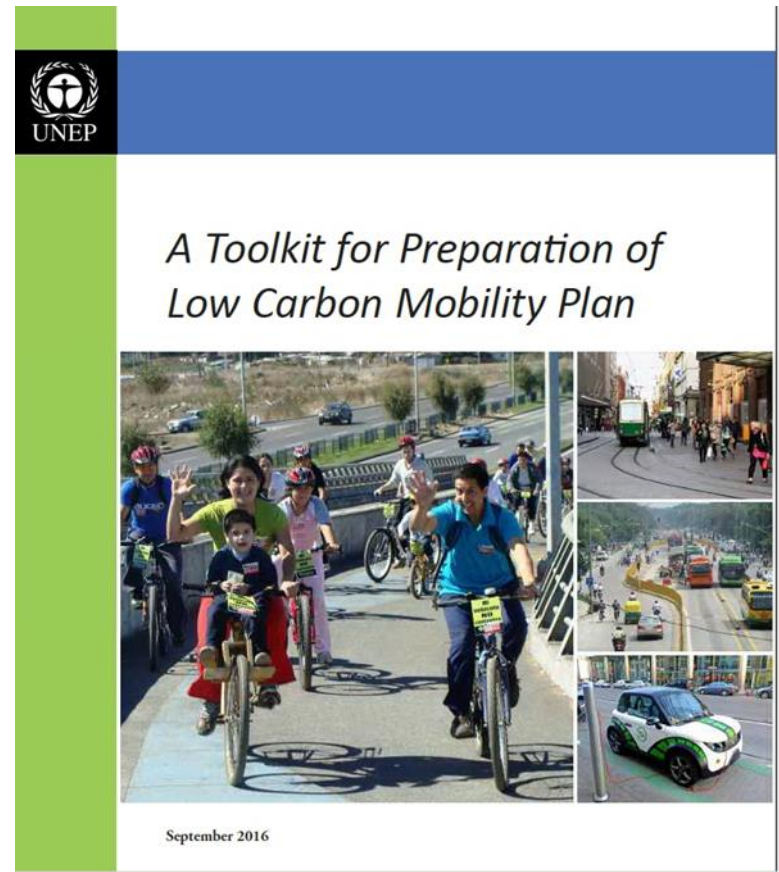
Advantages by law

- Municipalities can offer advantages
 - priority parking place
 - reduced parking prices
 - use of bus lanes
 - exception of access restriction
- tax reduction
 - no tax on car matriculation (no tax on mineral oil)
- Who can use the advantages
 - full electric or hybrid cars
 - less than 50g CO2 emission
 - at least 40 km full electric range
 - "E" traffic matriculation



Cities start mobility planning

- UNEP toolkit on low carbon mobility plan:
http://www.unclearn.org/sites/default/files/inventor_y/a_toolkit_for_lcmp.pdf
- EU toolkit for sustainable urban mobility planning:
<http://www.eltis.org/mobility-plans>
- In Germany: Climate protection plans, Traffic development plans, SUMP



Develop sustainable city logistics



Fotos: Senator of the City of Bremen on a Cargo E-bike, Bavarian Minister for Traffic at Cargo bike project in Nuremberg
Environmental report and sustainable reports of parcel services in Germany, UPS parcel service with bike



From post car to E-logistics



Fotos: Post car fleet in the Cities of Munich, Cologne, Regensburg, Bonn, more to come

Be aware: biking and walking is better than e-mobility



Fotos: Berlin examples (T. Kiel)
Keep solutions simple!

Solution for urgent problems first

Deficit of finance in street construction in Germany 2016
34 Billion Euro EUR (27 % of municipal finance deficite)



- You can't construct a charging point at a non fixed road
- Citizens will not understand priorities of the administration

Foto: Small street in the outer City of Hamburg (Altona)

Open questions

- How to convince people of new mobility items?
 - overcome comfort and convenience orientation
 - no car use for short trips
 - Promote public transport
 - promote car- und bike sharing
- Who are the actors and promoters?
- How to win players?
- How can enforcement be financed and organized?



Get connected with the future!

Thank you for your attention!

Bike rickshaw in Paris!

Tourism as a player



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