

Frankfurt e mobil

„Different kinds of using E-Mobility in the Frankfurt/Rhein-Main region“

Ansgar Roese
Director Center of Logistics & Mobility



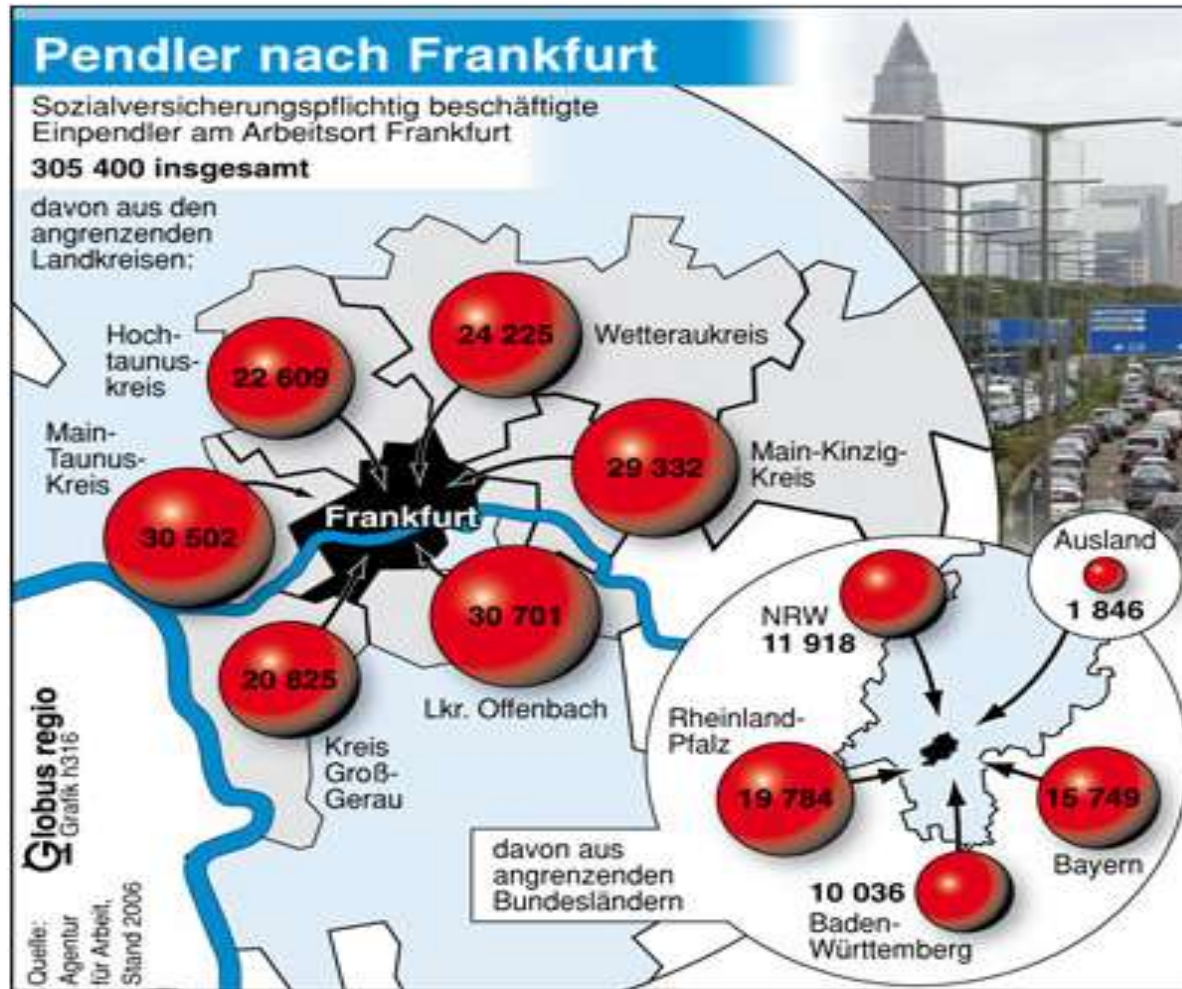
What kind of interest does have the City Frankfurt am Main at electric mobility?



- For the metropolitan area Frankfurt am Main mobility has a big influence.
- Frankfurt am Main is an international hub for people (mobility) and goods (logistics) moving.
- The Rhein Main airport is one of the top ten airports world wide. It has 55 Mio. passengers and 2.2 Mio. tons goods per year.
- The Frankfurt highway intersection is one of the most frequented highway intersection in Europe. 325.000 cars and trucks passes the intersection every day.
- Frankfurt am Main has the biggest number of commuters of all cities in Germany. More then 300.000 people enter the city ever day by car or public transport to reach their work



Commuters in Frankfurt am Main



Main Targets of Federal Government of Germany

- Until 2020 on German streets should drive minimum 1 Mio. electric vehicles. (52 Mio. cars in total)
- In 40 years the urban mobility in Germany should be independent from carbon energy. Innovative technologies are requested. Electric mobility could be the key technology.
- Electric vehicles don't have CO2 emissions and no noise. These facts are big advantages for urban mobility and the quality of life in metropolitan areas.
- With a long term focus, all electric vehicles should be powered by renewable energy.



Activities of the City Frankfurt am Main

- Im May 2009, Frankfurt am Main has decided by the city parliament to bring Frankfurt in a leadership position for electric mobility in Germany.
- Frankfurt Rhein-Main is one of 8 model regions in Germany promoted by the national ministry of traffic. The state of Germany spends 500 Mio. Euro implementing electric vehicles in urban mobility in these 8 model regions.
- Since July 2010 Frankfurt am Main is part of the European Union project „EVUE - Electric Vehicles in Urban Europe“.



Starting periode Frankfurt am Main

- In September 2009 the city started the implementation of the first projects with the introduction of E-Bikes (Pedelecs) and E-Scooters
- All projects will be performed by energy from renewable power resources (Watercraft from the river „Main“).
- Based of the availibility of electric vehicles and their price development, the city has started new projects for urban mobility solutions by electric mobility.
- Some companies took EV's (mostly converted cars) in their fleets for marketing and image aspects.



The starting period in Frankfurt

- First electric vehicles in use were „converted vehicles“ based on usual small cars. Frankfurt am Main did a lot of efforts to get these cars.
- Local energy provider started to develop a cost effective and practicable local infrastructure system. This system should offer the opportunity for every electric vehicle driver to charge his car without registration or the need of a membership from the local energy provider.
- Mainova has started „roadshows“ in Frankfurt am Main. Overall in the city, the company visited shopping malls and city districts, to offer people the opportunity to test electric mobility by Pedelecs, E-Scooters and EV's.



- In January 2008 UPS started testing the first electric delivery vehicle in London. Car was manufactured by the British company Modec.
- Half a year later the first left hand driving electric delivery vehicles reached Germany for a test period.
- Since 2009 UPS has six electric delivery vehicles in daily use in differnt German cities with very good expirience.
- In November 2010 UPS developed its own electric vehicle. It is a converted former gasoline delivery vehicle (20 years old), which does not get the permission to enter the low emission zones in German cities any longer.
- In Spring 2012 UPS will start a project with electric delivery bikes in Frankfurt am Main. Currently UPS is developing a special bike.



Electric delivery vehicles

UPS delivery vehicle (based on MODEC)

- 102 hp/Battery Li-Ion (51 kWh)
- Maximum total weight 5.500 kg
- Maximum payload 1.700 kg
- Maximum speed: 80 km/h
- Maximale distance: 100 km
- Maximale distance under UPS delivery conditions: 75 km
- Maximum charging time: 5 hours
- Daily driven route: 36 km
- Remaining capacity of battery after a daily tour: 47,2%
- Average of packages per day: 320 (Delivery and collection)
- Average number of stopps: 116 (Delivery and collection)



Modec: Interior view of vehicle

Communication

- The communication and marketing will be done under the claim „FrankfurtEmobil“
- FrankfurtEmobil is the partnership of different local companies to develop Frankfurt am Main as an electric mobility location.
- Part of the partnership are the local energy provider „MAINOVA“ AG, the public transport company „TRAFFIQ“, „FRANKFURT ECONOMIC DEVELOPMENT“, local bus provider „VGF“, the local housing company „ABG“ and others.
- Under the claim „FrankfurtEmobil“ the city bundles their different activities and partners in the field of electric mobility.
- In July 2011 FrankfurtEmobil launches an internet homepage with all kinds of information for electric mobility in Frankfurt am Main.



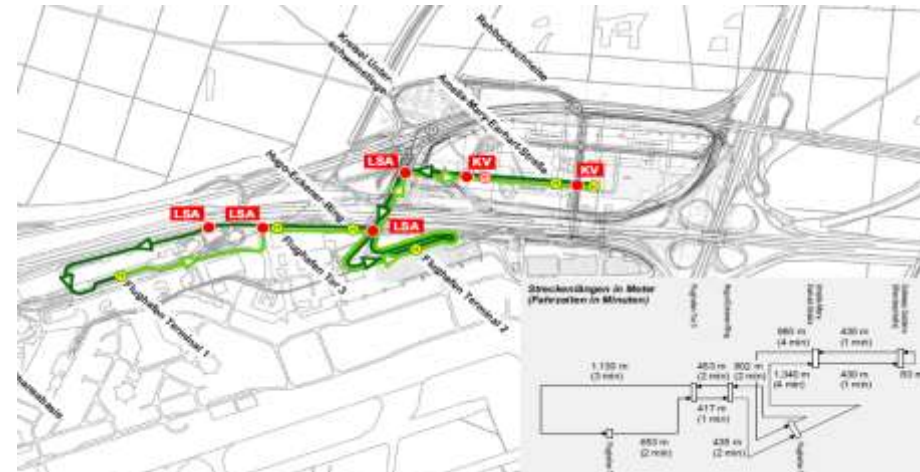
- In summer 2010, together with Continental AG (Automotive Supplier) Frankfurt am Main has done a workshop under the claim „Electric mobility at 2025 in Frankfurt am Main “.
- The main focus of the workshop was the identification of projects and milestones, how electric mobility could emboss the city in the year 2025 and which results should be reached by the use of electric vehicles in Frankfurt.
- Members of the workshop were politicians, experts, stakeholder and local companies.
- The result of the workshop is a strategy paper with 26 different projects and 7 aims, how e-mobility will affect the city transport system in 2025.



- Developing a urban district with the usage of electric mobility.
- Apply different kinds of electric mobility usage in daily operation
- Gateway Gardens is a 35 hectares area (former US-Airbase) in direct neighborhood of Frankfurt Airport
- Examples for usage:
 - Busline operated by electric buses from Gateway Gardens to the Airport
 - Using electric vehicles in company fleets
 - Install a carsharingsystem with EV's
 - Offering a pedelecsharingsystem with partnerstations at Frankfurt City
 - Delivery to Gateway Gardens by will be performed by E-trucks
 - Using electric transporters and trucks for airport & airfield logistics
 - Implementing smart energysystems in buildings



- Implementing a bus line through Gateway Gardens and Terminal 1 & 2 at Frankfurt Airport in daily operation (15 minutes timing device)
- End of line will be in Gateway Gardens
- Line will be arranged by 3 electric busses
- Start of bus line will be in summer 2012
- Charging of the buses will be done in the terminal by overnight.



Contact

Frankfurt **e** mobil

Frankfurt Economic Development GmbH

Mr. Ansgar Roese

Director Center of Logistics & Mobility

Hanauer Landstr. 126-128

60314 Frankfurt am Main

Tel: +49 (0)69 212 38764

ansgar.roese@frankfurt-business.net

<http://www.frankfurtemobil.de>

