The Penetration of Electric Mobility

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Due to growing environmental problems more and more countries try to set climate goals and advanced strategies regarding their transportation sector. Germany, Norway and China have a wide range of different ways to achieve their goals.

Germany

Motivation
- Paris Agreement, strict European Climate Targets, International Zero-Emission Vehicle Alliance
- Economy depends on the vehicle market

Strategies
- Goal of German National Platform Electric Mobility: lead market, leading for BEVs
- Tax incentives: 4.000€ for BEVs; 3.000€ for PHEVs; no Owner-Ship-Tax
- The German Electric Mobility Law enables EVs to have special rights in the normal road traffic.

Development
- many problems in terms of low-price classes and charging infrastructure
- Monetary measures not successful
- 1 Mio. EVs by 2020 won’t be reached

Norway

Motivation
- Ambitious climate policy goals
- Transport sector causes 30% of total greenhouse gas emissions
- Reduction goal 2020: 85g CO2/km

Strategies
- 1990/93 no import tax, free parking & charging
- 1996/97 reduced registration tax rate, low road tax, toll road exempt.
- 1998 imposed taxable benefit on Company cars
- 2001/05 VAT exemption and permanent bus lane access
- 2013 halved taxes on company cars

China

Motivation
- EV’s offer a technological restart
- experience in the electronics sector
- vehicle stock is rising
- High local emission concentration.
- Very few cities reach the standard for good air quality

Strategies
- economy plan “Made in China 2025”
- 80 Million EV’s in 2030
- Exclusive purchase premiums for domestic manufacturers
- Subsidies depend on electric range
- license lottery/ driving bans regulate the usability of conventional vehicles

Comparison

Domestic EV - market share

Germany: only 0,3 % of the car fleet of 46 Million are electrified
- Low purchase premium (fixed amount), EVs more expensive than conventional cars, 15 EVs per charging station
- Germany’s economic power is depending on the future technologies

Norway: highest relative proportion (7%) smallest car fleet
- EV’s 25% cheaper compared to conventional vehicles, 20 EVs/station
- Electric-mobility completes the image of an emission-free country

China: highest absolute number with 1,75 Million EV’s
- Retail price of EV’s halved by governmental incentives, 9 EVs/station
- Chinese manufacturers used the new technologies as a chance

Amount of charging stations is not directly coupled with success of EV’s, prices are more important, all countries have different motives