

E-Mobility from the market player perspective

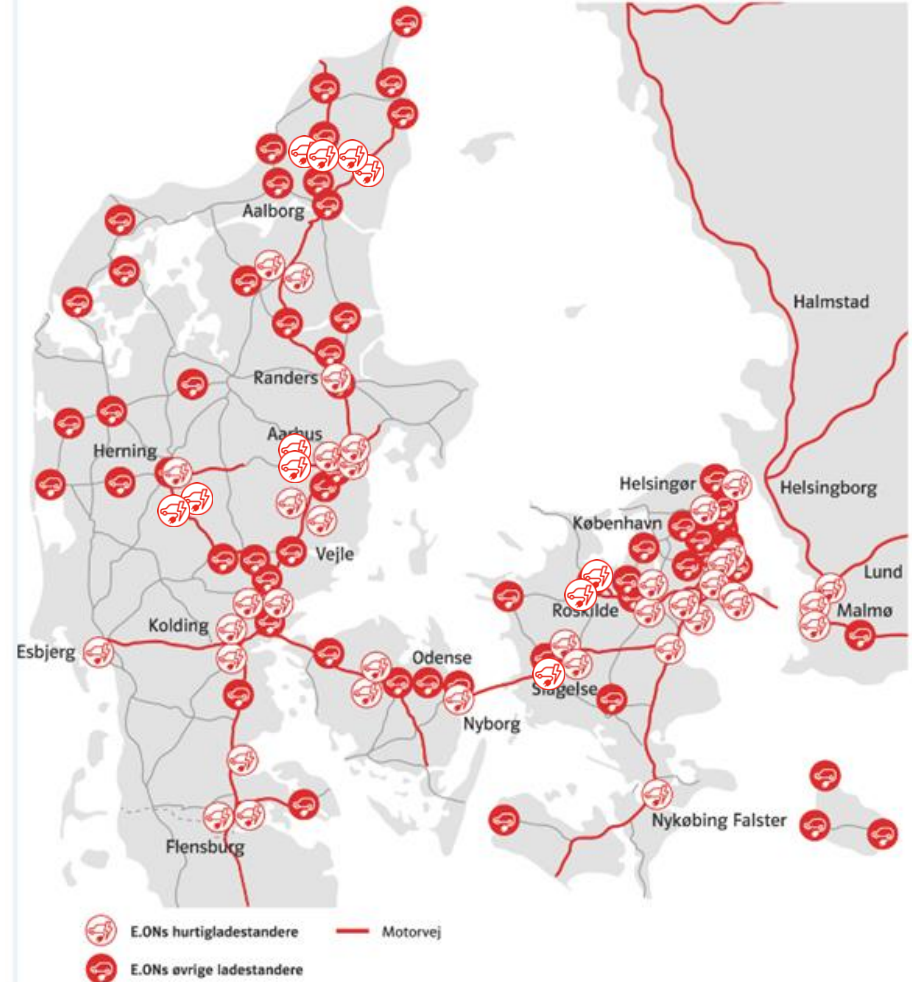
GREAT midterm conference



E.ON Denmark e-mobility

Key features

- Existing network of + 1300 public charge points located in DK
- CPO and MSP/EMO market roles
- Broad portfolio of B2C and B2B product offerings
- Main partner on major EV car-sharing initiatives in Copenhagen (DriveNow, GreenMobility)
- Connected services via charger communication and centralised E.ON IT backend setup
- Access to charging services available to all EV drivers
- Rapid expansion of E.ON charging networks



Public charging infrastructure – the roadmap to profitability

Increase # end-users



- Develop attractive e-mobility offerings for end-users (e.g. via bundled solutions and all-inclusive products)
- Reduce accessibility barriers (eRoaming / Open Access)
- Work in partnerships with other key players (e.g. OEMs, clearing-houses and public authorities)

Decrease CAPEX and OPEX per charger



- Engage in partnerships around deployment of public chargers
- Work with partners to ensure efficient deployment processes (e.g. in regards permitting)
- Develop new technical features that can reduce the installation costs
- Ensure efficient processes within internal organization

Increase consumption per end-user



- Install public infrastructure in prime locations (with other services available)
- Enable satisfactory parking conditions for end-users
- Reduce accessibility barriers (eRoaming / Open Access)
- Educate users on EV driving to reduce 'range anxiety'

Increase value adding services



- Develop new innovative features that will enable additional revenue streams also from public charging (e.g. smart charging)
- Integration of IT between different stakeholders to extend services towards end-users (e.g. in-car live navigation services / integrated app solutions / integration with other energy products)



Barriers to be overcome along the way

EV manufacturers

- Existing EV driving range is still not comparable to ICEV (will change soon)
- Technology is developing very fast – still gives reason to postpone EV purchase by end customers
- Additional EV models are needed to reach broader market segments (will come soon)
- Prices of EV power trains and batteries need to come down - to lower price of EVs (is taking place)

Interoperability services

- A multitude of access and payment solutions currently exist in the market
- Harmonisation of eRoaming solutions across Europe is not in place yet (will come)

Governments

- Lack of clear roadmap to reach climate goals in transport
- Only short term incentives seems to be possible (Norway not included)
- Too much dependency on income from fossil fuels in public budgets
- Lack of willingness to practice what is preached

Charging networks

- Public charging networks still need to be expanded in terms of coverage and service levels
- A new layer of ultra-fast charging stations is needed to service the 'next generation of EVs'
- Public funding is still needed to put Europe at the forefront in the Global race for electrification of transport







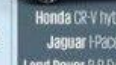




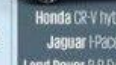



























































Sustainable Energy


The Paris Motor Show Confirms It: The Future Is Electric

Any automaker worth its salt is showing off a battery-powered car.

by Jamie Condliffe September 29, 2016

2017	2018	2019	2020	2021	2022	2023	2024
BMW i3 S facelift Citroën E-Berlingo Jaguar E-Pace mild hybrid SUV Kia Niro Hybrid & PHEV, Soul EV long range	Audi Q6 e-tron BMW i8 roadster Faraday Future FF91	Aston Martin DBX Audi e-tron A7 Sportback BMW X3 EV DS B SUV EV Hyundai Ioniq SUV Mazda EV Mercedes-Benz EQ C	Audi Q4 e-tron Citroën B SUV EV, C4 Cactus EV DS DS4 EV Ford Model E SUV Honda Jazz EV Jeep Wrangler hybrid Kia C SUV Land Rover Discovery Sport hybrid	Bentley EV SUV BMW i5 SUV Citroën C4 EV Honda Civic hybrid, HR-V hybrid Mazda Plug-in hybrid Mercedes-Benz EQ E, EQ S saloons Nissan Leaf SUV Peugeot New 308 EV	BMW New i3 Citroën C4 Picasso EV Mercedes-Benz EQ E, EQ S SUVs Peugeot C SUV EV Porsche Mission E SUV Renault C SUV EV Vauxhall Astra EV Volkswagen ID SUV	Fiat 500 hybrid Peugeot New 3008 SUV Vauxhall D SUV EV	BMW New i8 Citroën New C3 EV DS DS7 Crossback EV
            	            	              	                	            	     		

Established car makers fear being left behind in a technology battle



VW's ID will appear in hatchback and then SUV guises

