Urban future in the Netherlands
Ready to cooperate, charge & go

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Increased urbanisation

Urbanisation in Europe is an ongoing phenomenon, both in terms of urban land expansion and increasing population share.

Population density
75% of the EU population lives in urban areas.

Blurring lines
The line between the urban and the rural is blurring, with peri-urban space increasing much faster than traditional core cities.

Periphery
Urban population levels tend to rise on the periphery of cities, exacerbating traffic problems.

Safety concerns
A large majority of European citizens (73%) consider road safety to be a serious problem in cities.

Urban journeys
64% of all travel was made within urban environments in 2014.

Urban population
According to the UN, the population in Europe's cities grows by around two million inhabitants annually. London alone increased by 1 million persons between 1995 and 2015.

Mobility demand
Forecasts suggest an increase in demand of 2.6 times the current levels of mobility by 2050.

Congestion costs
Presently, congestion costs society roughly 1% of the total EU GDP.
Dutch vision

Why invest in electric vehicles?

• Contributes to the economic position of The Netherlands
• Energy Security
  - Less dependent on oil
  - EVs are more efficient
  - Smart charging: energy storage,
  - V2G and reduce grid investments
• CO₂ reduction
Sustainable transport goals

- New registered cars zero emission in 2035
- All cars capable for zero-emission in 2050
- In 2050: 60% less CO2 emission (1990)

- Sustainable Fuel Vision
- National Energy Agreement for Sustainable Growth
E-mobility ambitions

2020: 10% newly registered cars have e-drivetrain
2025: 50% newly registered cars have e-drivetrain
   – of which 30% is BEV
Nationwide network of charging points
Netherlands is a frontrunner in e-mobility
2020: >10.000 FTE in EV sector
EVs attractive for consumer market
More e-driven kilometres for PHEVs
Government support

Support roll out of charging infrastructure
  – Green Deal on Public Charging Infrastructure

Stimulating business development
  – Electric Transport Green Deal, Partners for International Business

Stimulating innovation
  – Key top sectors, e-mobility as a cross-over

Fiscal incentives

Dissemination of knowledge

Living labs, networks

Monitoring of EV development
Partners for International Business

Germany PIB: Working with German partners, Dutch companies are exploiting opportunities in charging infrastructure, shared-car and shared-bike concepts, and urban distribution.

United States PIB: Dutch companies are benefiting from the exchange of EV knowledge with American companies, knowledge institutes and public authorities through the creation of an investment fund and other efforts.

India: A partnership with India, where 6 to 7 million electric vehicles will be on the roads in 2030.
Amsterdam declaration: creating a smart Europe

In the first half of 2016 the Netherlands held the Presidency of the Council of the European Union. Guiding principles were to focus on the essentials: Growth and jobs through innovation and a coherent approach to issues concerning climate, environment and sustainability. The Amsterdam declaration “creating a smart Europe” was a result, stating: Europe’s strength lies in the development of new industrial technologies and services in which urban mobility, innovative start-ups and interregional cooperation play a key role.
Ready to cooperate …
Charge & go
The Netherlands: Urban mobility and energy transition
Ready to cooperate, charge & go
The Dutch Energiewende?

The Dutch government has set itself a higher target for renewable energy of 16% by 2020.

The Netherlands has identified three areas where it feels closer cooperation would be especially valuable:
A high penetration of electric vehicles.
- Not only in numbers, but also as a percentage per capita.

All most 100,000 EV’s

Over 20,000 charging stations
Electric car and van sales in Europe in 2015

Source: Transport & Environment based on EEA
Interoperability:

Electric vehicle manufacturers in Europe in 2015

Backoffice DSO → OSCP → Backoffice Operator Charge Spot → OCPP (2.0) → Charge Spot → Mode 3

World Mobility Summit Oct. 2016
A global player: ElaadNL

ElaadNL draagt bij aan de internationale standaardisatie van protocollen.

Samenwerkingsverbanden
- VK: adoptie van protocollen
- Duitsland: 15118 alignment met OCPP
- Japan: adoptie van protocollen
- Frankrijk: Renault; ontsluiten SoC
- Californië: Implementatie OCPP
- Italië: adoptie van protocollen
- Polen: Universiteit Lotz
- China: BYD: AC teruglevering
- Noorwegen: adoptie van protocollen
- Zweden: Lund, chargestorm
- Denemarken: Clever, eon, cotevos
- Ierland: ESB & OCA normering
- Spanje: Tecnalia, protocolen
- Slowakije: adoptie van protocollen
- Oostenrijk: Samenwerking via e-clearing.net
Heavy electric vehicles
Light electric vehicles
Charging infrastructure
EV rijdt op zonne- en windenergie en is onderdeel van het energienet.

Terugleveren
Opslaan duurzame energie
Rijden op energie
Onderdeel van het lokale net
The effect of Smart Charging

The effect of taxation?
Vehicle-to-Grid
Conclusion

Urban mobility and local sustainable generation: the holy grail of the energy transition.

Are you ready to cooperate?

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