Sustainable mobility policy of the City and the Province of Groningen

Nachhaltige Mobilitätspolitik der Stadt und Provinz Groningen

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City of Groningen
Groningen Energy Neutral in 2035
Ambitions Sustainable Mobility
The Netherlands

National policy: 49% CO$_2$ reduction by 2030

Transportation sector responsible for about 20% CO$_2$ emission

• 200.000 EVs by 2020

City of Groningen

• Mobility: 95% CO$_2$ neutral in 2035
• Infrastructure: Energy neutral in 2035
**Wo stehen die meisten E-Tankstellen?**

Ranking der europäischen Länder mit den meisten öffentlichen Ladestationen für E-Autos (pro 100.000 Einwohner)

<table>
<thead>
<tr>
<th>Land</th>
<th>Ladestationen pro 100.000 Einwohner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norwegen</td>
<td>185</td>
</tr>
<tr>
<td>Niederlande</td>
<td>180</td>
</tr>
<tr>
<td>Schweiz</td>
<td>46</td>
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<tr>
<td>Dänemark</td>
<td>45</td>
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<tr>
<td>Schweden</td>
<td>38</td>
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<tr>
<td>Luxemburg</td>
<td>37</td>
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<tr>
<td>Österreich</td>
<td>35</td>
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<tr>
<td>Estland</td>
<td>29</td>
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<tr>
<td>Deutschland</td>
<td>25</td>
</tr>
<tr>
<td>Frankreich</td>
<td>24</td>
</tr>
</tbody>
</table>

Stand: Juli 2017

Quelle: EAFO, VCO
E-charge points
Sustainable mobility approach City of Groningen

The right modality

Matching infrastructure

Fossil free

1. By foot
2. By bike
3. Public Transport

1. Attractive medieval city centre
2. Top notch bicycle infrastructure
3. Priority for busses
Sustainable mobility City of Groningen

Traffic Circulation Plan (1977)
CO$_2$ neutral (fossil free) in 2035

- Petrol
- Diesel
- TL (cleaner diesel)
- Natural gas
- Electric (coal)
- GTL (cleaner diesel)
- Bio-diesel
- Green gas
- Electric (coal)
- Hydrogen
- Electric (green)

- Courtesy of PitPoint
Province of Groningen

1959

Slochteren, Groningen
Groningen gas field
Hydrogen economy
Hydrogen plan Northern Netherlands
SO…
AND THIS IS WHAT WE DO:
Own fleet
Own fleet City of Groningen (500+)

- 6 hydrogen vehicles in 2017
- 10 hydrogen vehicles in 2018

- Battery electric where possible, hydrogen when needed
- 100% zero-emission vehicles in 2035
Hydrogen fill station
Groningen (2019)
2016

15 Q-link buses
(euro-6, 18 meter, airco, wifi)

45 euro-6 instead of euro-5
(euro-6, 12 meter regional bus)

2 battery electric
(euro-6, 12 meter regional bus)
Since dec 2017

5 euro-6 ‘dubbles’
(euro-6, 85 zitplaatsen, streekbus)

10 Q-link electric buses
(electric opportunity charged, 18 meter)

2 hydrogen regional buses
(electric/hydrogen, 13 meter, airco, wifi)
Future 350 busses
Fossil free in 2030
175 H₂ ?
175 battery electric ?
Current Bus depot
Public Transport - Trains
Pilot hydrogen train 2018

‘Power module’

Diesel out
Fuel cell in
‘WMO’ transport tender

(Taxis, school buses, handicapped transport, etc.)

Green gas or electric only
Green deal 1,000 charge stations

• 1,000 public e-charge stations in the provinces of Groningen and Drenthe
• 400 allocated to the City of Groningen
• Tender 2018-2022 (2028)
• 250 euro per e-charge station
• Goal: nearly the same price as you should pay at home!
• Q2 2018