The National Charging Infrastructure Agenda

An integrated approach to realize fast upscaling of charging infrastructure

The Netherlands has one of the most dense charging networks in the world and is a European leader in electric driving. The governments ambition is for all new cars to be emission free by 2030 at the latest. The sharp increase in adoption of electric vehicles poses new challenges for the national network of charging infrastructure; tripling the need for charge points by 2025 and even eight folding it for 2030. Together with the sector and the regions, the Dutch government formulated an answer to EV charging demand, as a part of the ambitious Dutch climate agreement of 2019.

Charging your car: easy, smart and everywhere

The National Charging Infrastructure Agenda: gearing up for electric driving
E-mobility in the Netherlands
as of January 1, 2020
(compared to 2019)

**EV passenger cars**
203,419 (▲ 30%)

**Market Share**
In share of new registrations
14%

**(Semi)Public Charge points**
49,520 (▲ 38%)

**New registered Battery electric vehicles**
62,004 (▲ 61%)

**Fast charge points**
1,252 (▲ 12%)

**Jobs within the e-mobility sector**
4,290 fte

**Dutch climate agreement**
Ambition for 2030
100% Zero emission new cars

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**Public-Private Partnerships to battle climate change**

The Dutch government collaborates with businesses, NGOs and knowledge institutions in Public-Private Partnerships to achieve climate goals. An example of this is the establishment of the 2019 Climate Agreement (Klimaatakkoord), in which over 100 parties were involved across 5 sectors. This agreement is aimed to reduce the greenhouse gas emissions by 49% in 2030 compared to 1990 levels in an affordable, fair and feasible way. The National Charging Infrastructure Agenda is part of the Dutch Climate Agreement.

**Roll-out strategy**

On average 7 out of 10 Dutch households rely on a public parking. This makes a reliable and dense public charging network essential for e-mobility adoption in the Netherlands.

The Dutch roll-out strategy for public charging infrastructure evolved over the last decade. Cities started to increase their collaboration in recent years, working together in regional concessions for public charging infrastructure. This approach has enabled new public charging infrastructure to be rolled out with little or no additional government investment.

**Charging point prognoses**

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<thead>
<tr>
<th>Type</th>
<th>2020</th>
<th>2030</th>
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<tbody>
<tr>
<td>Fast chargers</td>
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<td>Semi public</td>
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<td>Private</td>
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The challenge
National Charging infrastructure Agenda

The National Charging Infrastructure Agenda (hereafter: Agenda), as part of the Climate Agreement, is a widely supported multi-year policy agenda with the ambitions and actions for creating a charging infrastructure network in the Netherlands. As the world of mobility and energy gets more complicated and closely connected, the Agenda focusses on forming an integrated approach to answer the charging needs of the future. The Agenda’s main pillars are creating:

- A network with high coverage of charging infrastructure;
- Strategic & datadriven placement of public charging infrastructure;
- Accessible information such as location and availability of charging point and charge rates;
- A good balance for types of charging infrastructure for all modalities;
- Future-proof charging infrastructure and smart charging to prevent capacity overload on the electricity grid.

Input

The proposals submitted by the Charging Infrastructure Working Group of the Climate Agreement were the starting point for the Agenda. Based on this, four dedicated groups of different parties that represent both public and private interests were responsible for further elaboration of sub-topics, such as price transparency, Smart Charging, logistics and innovation. As a result of this process, the Agenda consists of the products delivered by the four groups, and is coordinated with the parties they represent.

Organisation structure

Regional project offices

A major part of the actions in the Agenda are coordinated and carried out by regional project offices. In addition to the general tasks, the six regional project offices (5 regions and the 4 biggest cities) have specific accents in their approach.

Agenda Stakeholders

Public organisations
- Ministry of Infrastructure and Water Management - government
- Netherlands Enterprise Agency (RVO) - government
- ElaadNL – grid operators / DSOs
- Netherlands Knowledge Platform for Public Charging Infrastructure (NKL)
- Association of Netherlands Municipalities (VNG)
- Cities of Amsterdam, Rotterdam, The Hague and Utrecht
- interprovinciaal Overleg (IPO) – Dutch provinces
- Metropolitan Region Amsterdam electric (MRAe)

Branche Associations
- National Sustainable Energy Association (NVDE) – renewable energy
- Dutch Organisation for Electric Transport (DOET) – e-mobility
- RAI Association – manufacturers & importers
- AutomotiveNL – automotive industry
- eViolin – charge point operatorsz
- Evofenedex – logistics

The process
The current realization process of charging infrastructure is unable to keep track of the expected sales numbers of EVs. Starting 2021, the realization of public charging infrastructure must be proactively designed by cities & regions. In addition, a number of basic conditions are required for governments, market parties and grid operators to enable the acceleration of the roll-out of the charging infrastructure in an efficient, predictable and future-proof manner.

**Actions:**
- Regions will work with cities in order to form a locally owned, integral vision on charging infrastructure, encompassing:
  - Private / (semi) Public / Fast Charging;
  - Different EV modalities.
- Developing placement policies for public charges by regions and cities, which will be updated every two years.
- Determining locations for fast chargers and electric bus chargers together with the grid operators.

The switch from driving with fossil fuel cars to e-cars powered by renewable energy must be attractive and comfortable to all Dutch. This requires that the market and infrastructure for EV charging points is open, transparent, interoperable and future-proof.

**Actions:**
- Creating a national access point for dynamic data on all (semi) public charge points.
- Ensuring price transparency for e-drivers by making a deal between governments, Chargepoint Operators and Distribution System Operators.
- Developing open protocols and standards for the entire value chain of charging.
- Developing open markets through interoperability of charging infra and open protocols.

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**Results**

The National Charging Infrastructure Agenda consists of a set of agreements between the various stakeholders, which together form a concrete multi-year policy program, combining ambitions & actions. The Agenda’s key elements are highlighted here.

1) **Realization process**

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2) **Price transparency, open protocols and open markets**

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Given the growing number of charging points, it is important to prevent that the growing demand for electricity for charging EVs disrupts the electricity grid. Therefore a Roadmap Smart Charging 2030 is being developed. This roadmap provides insight into the bottlenecks and solutions for smart charging.

**Actions:**
- Developing *market models* for Smart Charging.
- Organizing *legislation* and regulation on smart charging.
- Developing the *technical architecture* for smart charging.
- Developing *open standards* and open protocols for smart charging.

Making charging infrastructure user friendly, scalable and future-proof requires innovation. Therefore the Agenda focuses on:
- **Electric driving** – promote EV uptake in all modalities
- **New mobility services** – Mobility as a Service, car sharing, mobility hubs and logistic hubs
- **Smart Charging** – charging innovations like smart charging adoption, bi-directional charging, pantograph and wireless charging

**Actions:**
- Developing a *roadmap* in which the innovation challenges arising from the Agenda are included and described.
- Making agreements with involved parties about the implementation of programs and projects arising from the Agenda.

The goal is to develop an approach for realizing charging infrastructure for different segments in the logistic sector: City logistics, Heavy Duty Transport and Inland shipping.

**Actions:**
- Developing an *industry roadmap* and investment/financing strategy for creating and realizing a robust network of charging infrastructure for growth of zero emission heavy vehicles.
- Conducting research into logistics charging infrastructure policies and standards.
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