

# 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 government's 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

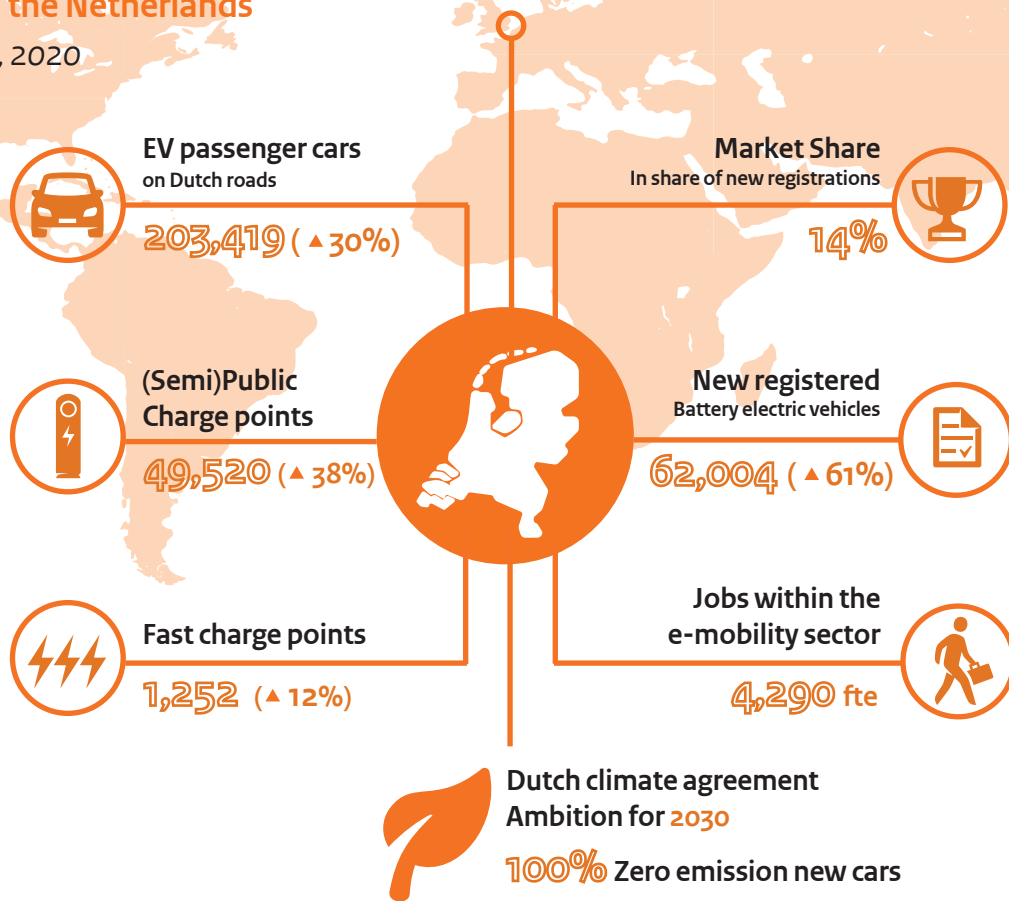
*The National Charging Infrastructure Agenda: gearing up for electric driving*



Nationale  
Agenda  
Laadinfrastructuur

## E-mobility in the Netherlands

as of January 1, 2020  
(compared to 2019)



## Public-Private Partnerships to battle climate change

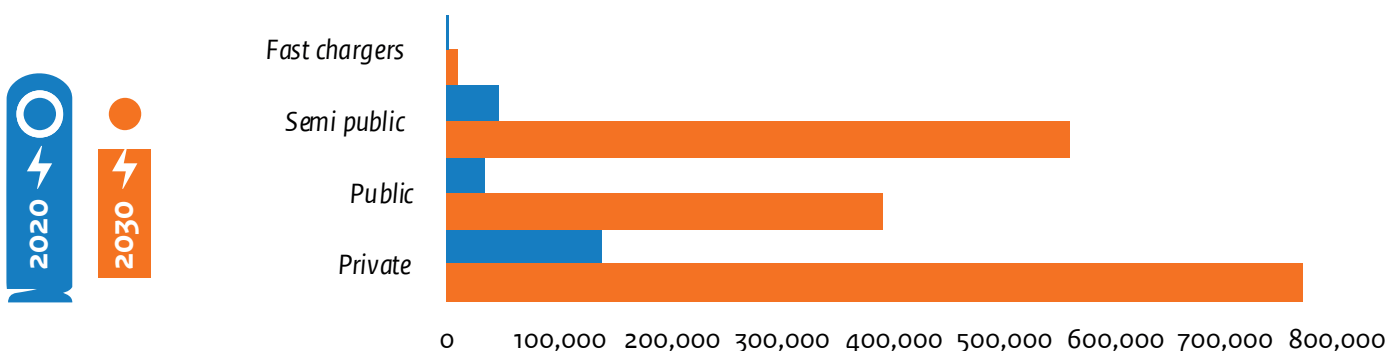
The Dutch government collaborates with businesses, NGOs and knowledge institutions in Public-Private Partnerships to achieve climate goals. An example of this is the establishment of the 2019 Climate Agreement (Klimaatakkoord), in which over a 100 parties were involved across 5 sectors. This agreement 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.

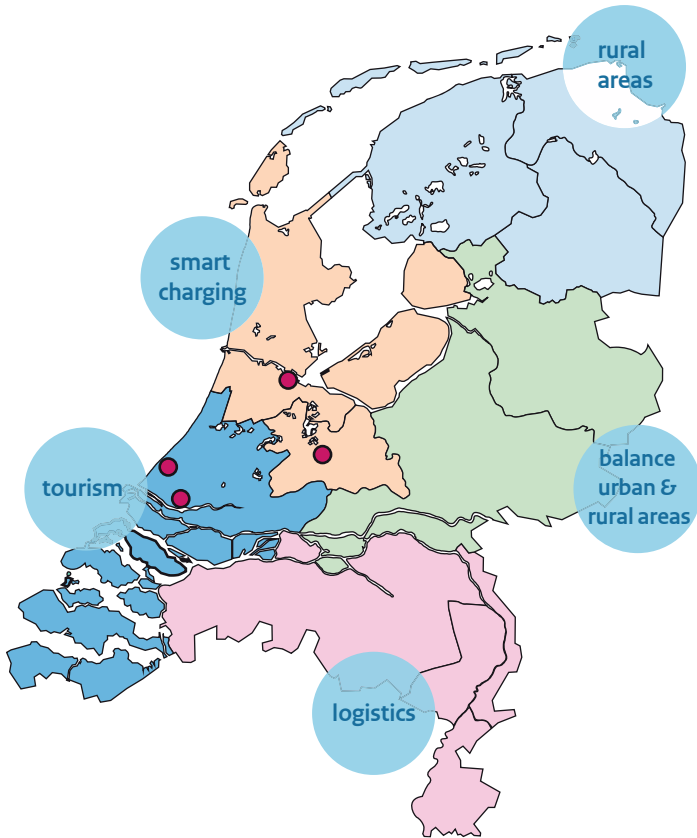
## Charging point prognoses



## 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.



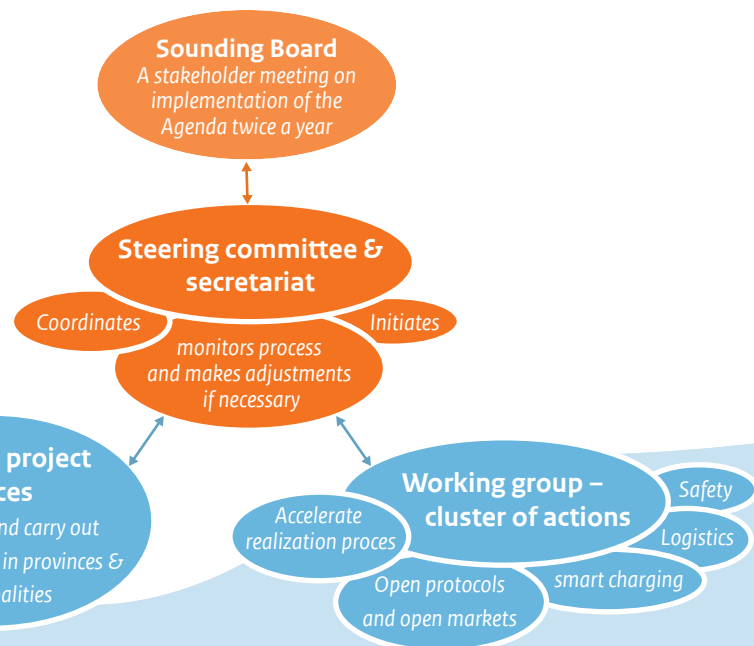
## Input

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 operators  
 Evofenedex – logistics

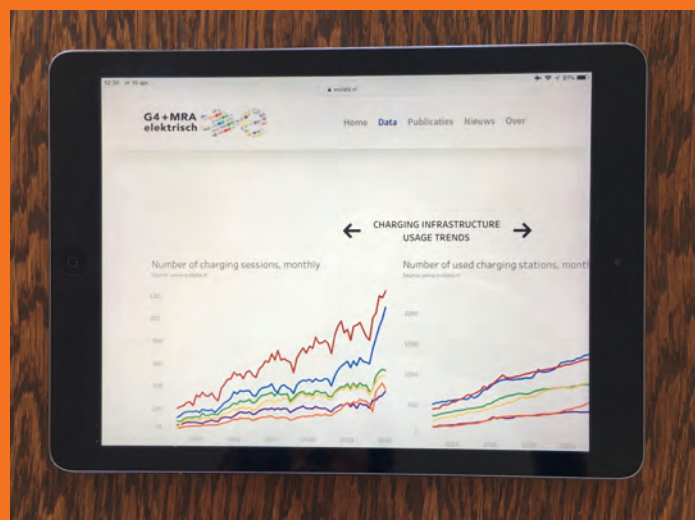
## Results

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



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



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:
  - o Private / (semi) Public / Fast Charging;
  - o 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.

### 3) Boosting Smart Charging



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.

### 4) Promote innovation



Making charging infrastructure user friendly, scalable and future-proof requires innovation. Therefore the Agenda focusses 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.

### 5) Logistics



In addition to the objective of realizing a dense charging infrastructure network for passenger vehicles, there is the need to develop a Roadmap for Logistic Charging Infrastructure.

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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