

A woman with long, wavy red hair, wearing a brown, textured coat, is shown from the side, focused on plugging a blue charging cable into the front of a dark-colored car. The car's hood is wet with raindrops. The background shows a residential street with brick buildings and a bicycle parked nearby. The scene is overcast.

Dutch National Charging Infrastructure Agenda

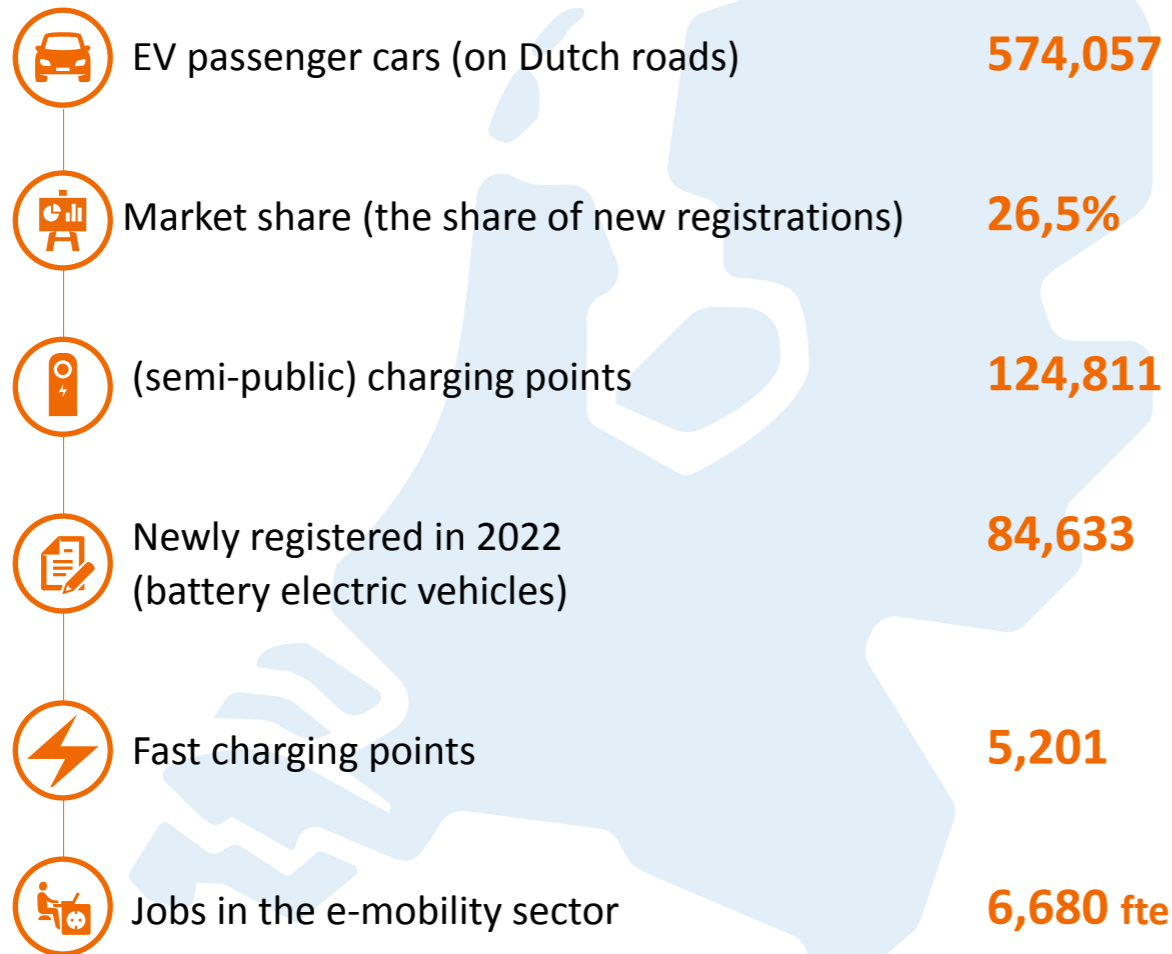
Brochure

Introduction

The Netherlands is facing a large mobility challenge. The Dutch Climate Agreement aspires all new passenger cars to be zero emission by 2030. By then, the Netherlands is expected to have 1.9 million electric passenger vehicles. On top of that there will be electric buses, vans, trucks, inland ships and light electric vehicles. The Netherlands has one of the most dense charging networks in the world and is a European leader in electric driving. The Netherlands is ambitiously aiming to maintain this position, and to extend it for all electric mobility. In order to provide electricity for a growing number of electric vehicles, the availability of charging locations must increase accordingly. The Dutch National Charging Infrastructure Agenda is working to meet this demand.



E-mobility in the Netherlands as of April, 2023



Public-private partnerships to battle climate change

The Dutch government collaborates with local governments, companies, branch associations and knowledge institutions in public-private partnerships to achieve climate goals. This is how the 2019 Climate Agreement came about, including the Dutch National Charging Infrastructure Agenda. The Netherlands also complied with the ambitious goals set in the so-called Fit for 55 package, aiming to reduce greenhouse gas emissions by 55% in 2030 compared to 1990.

Roll-out strategy

Seven out of ten Dutch households on average rely on public parking or parking garages. 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 has evolved over the last decade. Municipalities have increased their collaboration, 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. These regional efforts are often in collaboration with the Agenda's regional project organisations. Besides facilitating concessions, the project offices translate national points of action into regional and local plans. With some regions more experienced in the charging infrastructure field, the exchange of knowledge is very helpful to accelerate.

Multi-annual policy agenda

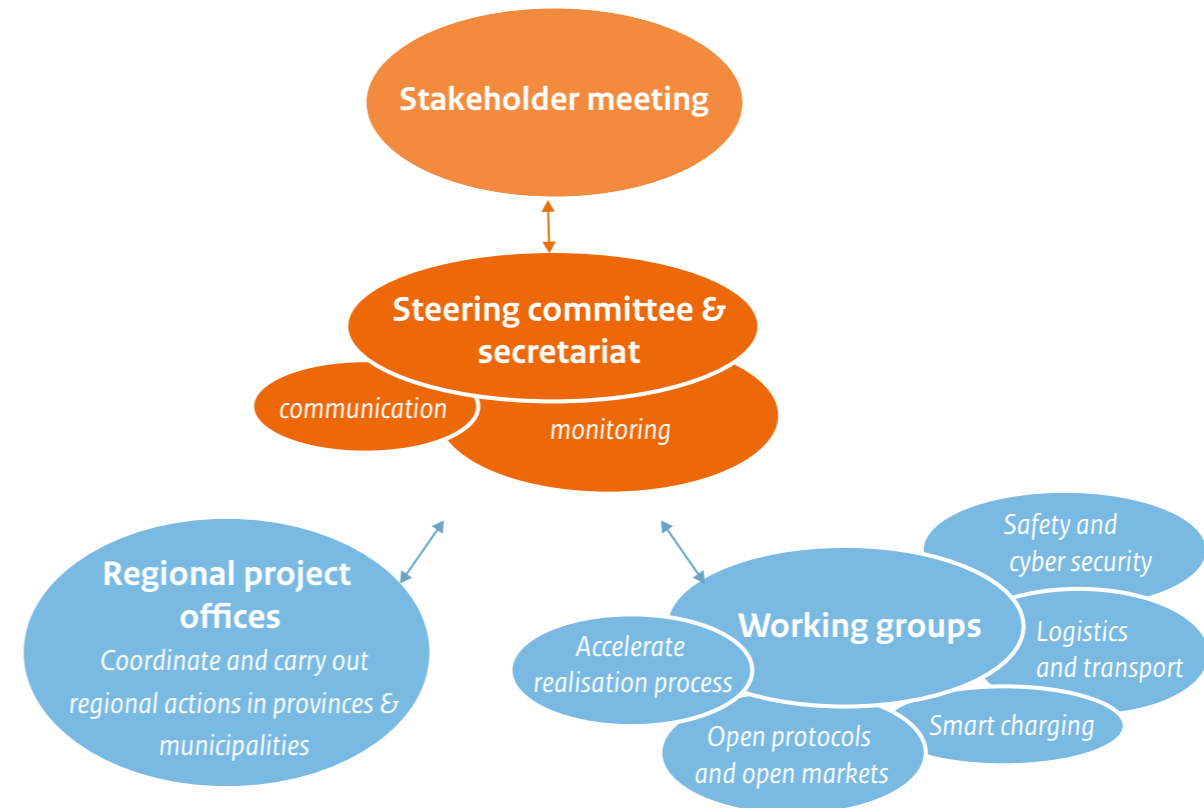
The Dutch National Charging Infrastructure Agenda is a widely supported multi-stakeholder, multi-annual policy agenda which aims to make charging easy, smart and widely accessible. Fundamentally, the Agenda works towards:

- A network with high coverage of charging infrastructure
- Strategic and data driven placement of public charging infrastructure
- Accessible information such as location and availability of charging points and charge rates
- A good balance for types of charging infrastructure for all modalities
- Future-proof and both physically and digitally safe infrastructure
- Smart charging to prevent capacity overload on the electricity grid

Actions and agreements within the Agenda are implemented nationally, regionally and locally. The market, government and grid operators work together to support municipalities and regions to build an adequate, trustworthy charging network and an electricity grid that is ready for a zero emission future.

Furthermore, monitoring and communication are central to the success of the agenda. Monitoring progress of all types of charging infrastructure in the Netherlands allows all stakeholders to take appropriate actions. Communicating about the Agenda's research, products and milestones ensures that all relevant parties can access all relevant information.

Organisation structure



Stakeholders

- Public organisations
- Ministry of Infrastructure and Water Management
- Ministry of Economic Affairs and Climate Policy
- Netherlands Enterprise Agency (RVO)
- Rijkswaterstaat – government
- Association of Dutch Municipalities (VNG)
- Interprovincial Counsel (IPO)
- Formula E-Team (FET)
- Six regional project organisations: East (GO-RAL), G4, North, Northwest (MRA-E), South, Southwest

Knowledge institutes

- ElaadNL – grid operators/DSOs
- Netherlands Knowledge Platform for Charging Infrastructure (NKL)
- Royal Dutch Touring Club (ANWB)
- Fire Department
- Netherlands Institute for Public Safety (NIPV)

Branch associations

Each working group collaborates with relevant branch associations, pertaining to sustainable energy, the e-mobility sector, e-drivers, automotive and transport.



Working groups

The working groups operate independently and have individual purposes and goals. They report progress to the steering committee. Every working group is a public-private partnership, including knowledge institutes for specific subjects.



1) Accelerate realisation process

In order to realise an accessible and comprehensive network of charging infrastructure, the Accelerate realisation process working group ensures that the demand for electric charging points is answered efficiently and flexibly, now and in the future. To this end, the working group is committed to creating the right preconditions for upscaling.

ACTIONS

- Realising regional planning maps to visualise charging supply and demand in neighbourhoods and business parks for all modalities.

- Initiating process optimisation and cooperation among municipalities, network operators, and charging point operators to reduce lead times in the realisation process.
- Initiating laws and regulations that accelerate the roll-out of charging infrastructure.



2) Open protocols and open markets

In order to optimally facilitate current and future EV drivers, an open market is crucial. In an open market, the EV driver has freedom of choice, can charge with one card and is able to charge for a competitive tariff. Open protocols facilitate monitoring, provide information on charging sessions and charging points. Interoperability is key in the Dutch approach. The working group focuses their attention not only on the Netherlands, but voices the Dutch opinion within the European Union as well.

ACTIONS

- Developing an open, publicly accessible e-mobility IT system.
- Facilitating standardised interfaces for data exchange parties.



3) Smart charging

The working group 'Smart charging' considers electric transport a great opportunity for the energy transition. Given the increase in the supply of wind and solar energy, electric vehicles can assist in balancing the energy system. Moreover, smart charging technology can be applied by drivers to charge cheaper and more sustainably. Electric vehicles are potentially electric power stations on wheels: for example, they store sustainable energy when the sun is shining and supply the energy when you need it at home in the evening. As smart charging is beneficial for electric drivers it offers opportunities for new businesses. Smart charging is rapidly becoming proven technology and a logical next step is to transform this technology into customer propositions. Given the accelerated uptake of electric vehicles and the capacity boundaries of the power grid, smart charging is essential. The Netherlands aims to make electric charging of cars the new standard.

ACTIONS in progress:

Smart Charging for all. The ambition of the action program "Smart charging for everyone" is to make every charging session on a destination location smart by default in 2025. To achieve this goal a national programmatic collaboration with all stakeholders is created. The action program consists of:

- Developing the action program "Smart charging for everyone", which includes:
 - realising attractive (smart) charging offers by market players for users.
 - national roll-out of grid-friendly charging.
 - coaching users in the adoption of (smart) charging.
- All while complying with the working group's previously defined Smart Charging Requirements (SCR).

The approach focuses on actions that have effect in the short term. The mindset is to keep things simple and have the focus on what is possible.

4) Safety and cyber security

Electric transport and charging has to be safe. This working group provides research, guidelines and other knowledge products, for both physical safety and cyber security.

- Electric passenger vehicles
- Electric transport and charging in the logistics and construction sectors
- Zero emission buses
- Fire safety of electric vehicles in underground parking garages

The research reports [can be found here](#)

Cyber security

Most EV-charging stations are 'connected' to the back office of the Charge Point Operator or to (Building) Energy Management Systems. Proper cyber security is required to protect privacy, mobility itself and the electricity grid. If a cyber-attack was targeted at a CPO-back office the electricity system might become instable. A professional large scale attack may cause a regional or (inter)national blackout of the electricity grid.

ACTIONS

- Create awareness at market parties and stakeholders (charge station manufacturers, CPOs, cities purchasing public charging stations, building owners buying private charging stations etc).
- Share knowledge between market parties.
- Develop international cyber security standards for charging stations and certification scheme.
- Develop legal framework on NL and EU-level.

5) Logistics and transport

The logistics sector can play a significant role in reducing climate change emissions and increasing air quality in cities. The Dutch government is stimulating the electrification of delivery vans and trucks by developing 30-40 zero emission zones for city distribution in major Dutch cities only accessible with zero emission vehicles. By 2030 an expected amount of 250.000 delivery vans and 16.000 trucks will be electrified to enable zero emission city logistics. Charging logistical vehicles requires much more concentrated infrastructure on business and industry parks with higher power requirements and has major grid impacts.

The working group Logistics is focused on anticipating and preparing the required charging infrastructure for logistics sector.

ACTIONS

- Creating awareness at logistics companies, governmental bodies and grid operators where and what type of charging infrastructure for logistics is required.
- Sharing knowledge with policy makers how to prepare for and how to stimulate the development of logistic charging facilities.
- Develop hands-on tools and guidelines for the logistics and building sector how to develop appropriate charging infrastructure within the current grid limits.
- Facilitate the development of a publicly accessible charging network of charging facilities for heavy duty trucks with national coverage.

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More information on
www.agendalaadinfrastructuur.nl