

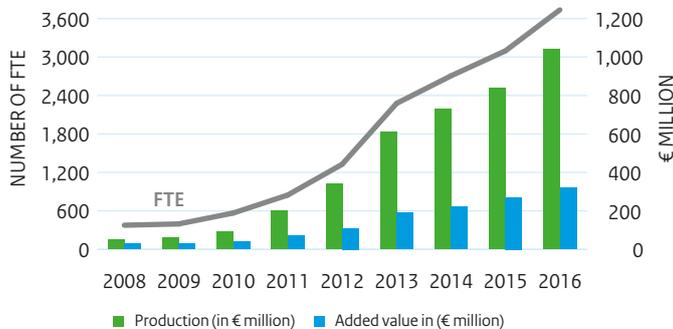


# Economic growth due to Electric Vehicles in 2016

At the end of 2016, the Netherlands reached second place in the world with regard to the consumer market share for electric passenger cars. Dutch businesses are profiting from the earning economic potential of electric vehicles both on the home market and far beyond.

## A promising sector

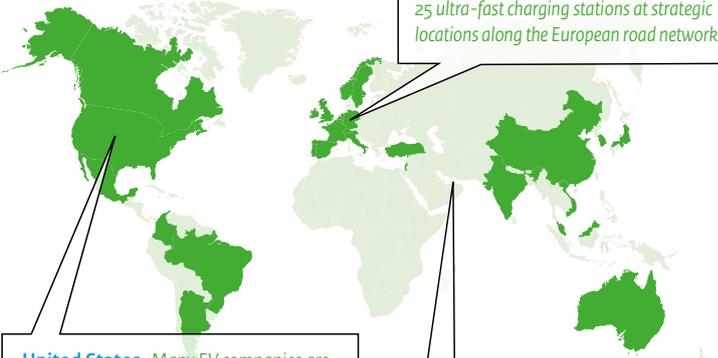
The electric vehicle (EV) sector has developed into one with a great deal of potential for the Dutch economy. By late 2016, the number of related jobs in the Netherlands had risen to about 3,700 full-time equivalents (FTE). In two years' time, the production and the added value of the sector had increased by some 40%.



## EV companies are active worldwide

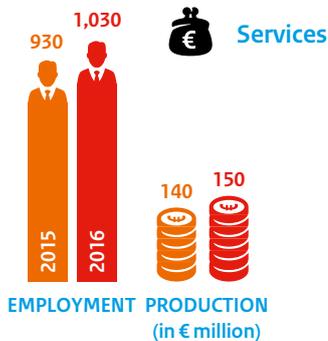
Dutch companies are increasingly exporting EV knowledge, products and services abroad. The illustration depicts countries where there are many Dutch activities or with which knowledge exchange takes place; for example, via one of the six Partners for International Business (PIB) programmes.

**Germany** Fastned is involved in various projects intended to create a European fast-charging network, including in the United Kingdom, Belgium and Germany. In its Fast-E & Ultra-E programme, funded by the European Commission, Allego is creating 307 fast-charging stations and 25 ultra-fast charging stations at strategic locations along the European road network.



**United States** Many EV companies are engaging in international collaboration or are expanding abroad. Viriciti, EVBox and Prodrive Technologies, for example, have all opened offices in the United States.

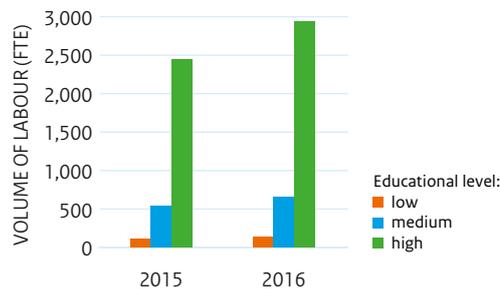
**Dubai** 2Getthere is building an Automated People Movers System at Bluewaters Island in Dubai. The system has the capacity for the fully automated transport of 5,000 people in either direction over a distance of 2.6 kilometres.



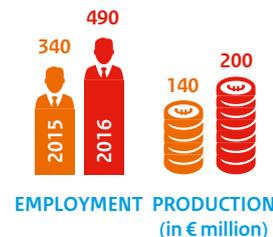
Taxi services, shared car concepts and lease products are increasingly electric. Companies are responding to the growing consumer demand for sustainable transport and Mobility as a Service solutions. A number of businesses, including the online supermarket Picnic, are developing new services and business models based on electric vehicles.

## Educational levels in the electric vehicles sector

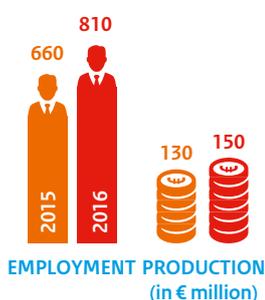
In the Netherlands, the volume of labour (in FTE) is growing in line with the development of the market for electric vehicles. The major portion of the EV jobs are filled by individuals with a high educational level (university). Source: Statistics Netherlands (CBS)



## Propulsion technology and components

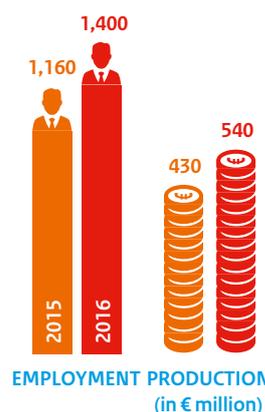


The market cluster for Propulsion technology and components, battery management and information systems experienced strong growth in 2016. A few years ago, Prodrive Technologies decided to focus on the development of advanced technologies for electric vehicles and is profiting from the growing demand.



## Charging infrastructure and smart grids

The cluster related to charging infrastructure has an acknowledged leading position in the world. These companies export knowledge and products around the world, and release cutting-edge innovations on the market. Businesses focusing on more extensive services for charging infrastructure are increasing their share of this cluster.



## New and converted vehicles

After the initial growth in the market for passenger cars, electric propulsion is being increasingly used across the transport sector, such as in light electric vehicles, shared cars, buses and already on a small scale in the cargo transport sector. VDL Bus & Coach and Ebusco have recently emerged as European frontrunners in the field of electrically powered buses.

# Electric vehicles create economic growth

The market for electric vehicles is growing and expanding. Production and employment are on the rise, while increasing numbers of vehicles can be electrically powered. Dutch companies are profiting from the leading position that the Netherlands has achieved in the number of electric vehicles driving around.

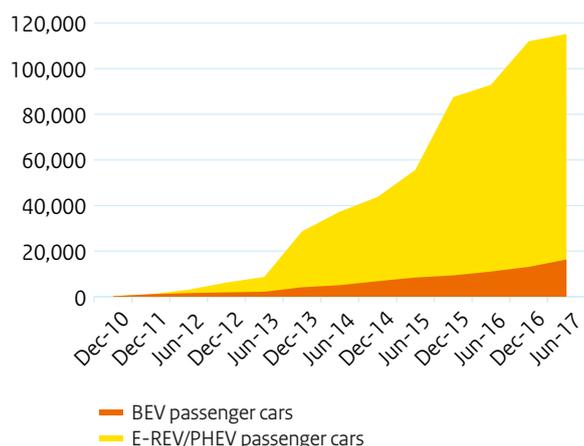
## 1. Market figures reflect growth

- The number of electric cars and charging points continues to grow, with the number of cars topping 115,000 in July 2017.
- Economic indicators reflect this growth, with production and added value increasing by 40% between 2015 and 2016.
- The number of jobs in the EV sector had increased to 3,730 FTE in late 2016.

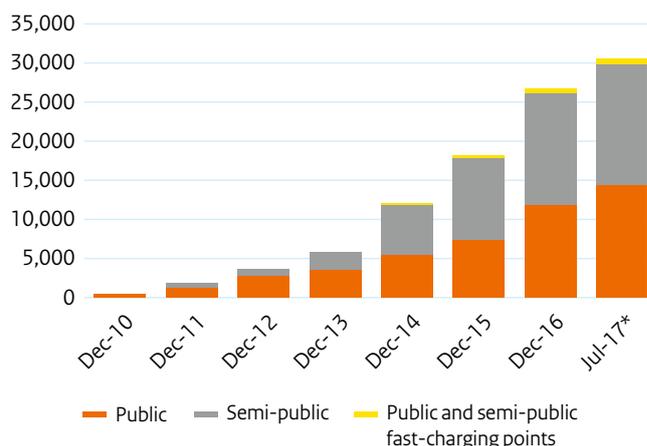
## 2. Development in all market clusters

- The market cluster for New and converted vehicles is growing strongly, in part due to the expansion of the market to include electric buses, light electric vehicles and converted lorries.
- Businesses in the market cluster for Charging infrastructure and smart grids are profiting from domestic growth. The number of people charging at home is increasing, while the number of public and semi-public charging points in the Netherlands has more than doubled in two years' time.
- As a result of the worldwide growth in EV use, the strongest growth of all clusters is represented by the market cluster for Propulsion technology and components, battery management and information systems, thanks to the demand for the advanced technology of Dutch suppliers.

Number of electric passenger cars in the Netherlands, Dec 2010 - July 2017



Number of public and semi-public charging points and fast-charging points in the Netherlands, Dec 2010 - July



- Companies in the market cluster for Financing, payment, mobility and other services develop new services and business models that address the energy and mobility issues of the 21<sup>st</sup> century.

### 3. Growing role of EV in education

- Intermediate vocational education: Nearly every major institution for intermediary vocational education has included EV in its curriculum. The vehicle technology programmes are, however, still strongly focused on internal combustion engines.
- Higher vocational education (college): The degree programme departments at the universities of applied sciences are working towards the transition to sustainable transport in the Netherlands within joint knowledge centres.
- University education: Among research universities, the technology universities in particular have embedded sustainable mobility in their curricula. In some 40 programmes, basic research is being carried out on electric mobility.
- More and more is being published in scientific journals and at scientific conferences, with the number of such publications in the Netherlands increasing by about 50% between 2014 and 2016.

### 4. Policy encourages innovation

- The Dutch central government promotes the sale of fully electric vehicles with exemption from the purchase tax and circulation tax, as well as a 4% additional tax liability for company cars instead of the usual 22%.
- In addition, the government encourages the knowledge exchange and knowledge development of various sectors with its Top Sector policy and tax advantages for R&D. Industry, science and government work together to tackle societal challenges by stimulating innovation, attracting talent and ensuring a solid position in the international context.
- Various local governments have also developed their own incentive policy.

### 5. More and more cross-border

- EV businesses profit from the strong Dutch reputation and are developing more and more activities across the border.
- Companies producing charging infrastructure, electric vehicles and/or vehicle components or services are using the domestic market to launch activities abroad.
- The Partners in International Business programmes help EV companies to take their first steps on a new market.



**Electric buses used on Terschelling**

(Photo: VDL Bus & Coach)



**Fast-charging at increasingly high capacity**

(Photo: Fastned)

## ‘Cashing in on Electromobility’s Economic Potential report

### Situation as at mid-2017

In order to monitor the extent to which opportunities for green growth are being utilised, RVO.nl (Netherlands Enterprise Agency) compiles a report on the earning potential of electric vehicles (EV) and the extent to which this potential is being capitalised. The report provides insight into the latest developments regarding EV in the Netherlands, based on market reports, interviews with individuals involved and desk research. The present fact sheet is based on information found in this report. For the entire report (in Dutch), please visit [www.hollandtradeandinvest.com](http://www.hollandtradeandinvest.com)



This is a publication of:

Netherlands Enterprise Agency  
Croeselaan 15 | 3521 BJ Utrecht  
PO Box 8242 | 3503 RE Utrecht  
T +31 (0) 70 379 80 00  
E [elektrischrijden@rvo.nl](mailto:elektrischrijden@rvo.nl)  
[www.rvo.nl/elektrischrijden](http://www.rvo.nl/elektrischrijden)

This publication was commissioned by the ministry of Infrastructure  
and Water Management

© Netherlands Enterprise Agency | December 2017

Netherlands Enterprise Agency is a department of the Dutch  
ministry of Economic Affairs and Climate Policy that implements  
government policy for agricultural, sustainability, innovation, and  
international business and cooperation. Netherlands Enterprise  
Agency is the contact point for businesses, educational institutions  
and government bodies for information and advice, financing,  
networking and regulatory matters.