



# Electric passenger cars and charging points in The Netherlands

## Analysis of 2017

### Content

1. Development of electric BEV and PHEV passenger cars in the past 5 years
2. Registrations per month of BEV and PHEV passenger cars in 2017
3. BEV and PHEV new passenger cars in proportion to all new passenger cars registrations
4. The development of the number of BEV and PHEV passenger cars and of charging points
5. Top 12 BEV en PHEV passenger cars in 2017

This publication offers an overview of the development of electric vehicles and charging points in the Netherlands in 2017. We concentrate on two types of passenger cars: Battery Electric Vehicles (BEV) and Plugin Hybrid Electric Vehicles (PHEV<sup>1</sup>).

### 1. Development of electric BEV and PHEV passenger cars in the past 5 years

The next table consists of the cumulative number of registrations<sup>2</sup> up to and including the end of each of the past 5 years.

Total registrations per vehicle type <sup>3</sup>	31-12-2013	31-12-2014	31-12-2015	31-12-2016	31-12-2017	% growth i.c.t. 31-12-2016
BEV passenger cars	4,161	6,825	9,368	13,105	21,115	61%
PHEV passenger cars	24,512	36,937	78,163	98,903	98,217	-1%
BEV + PHEV passenger cars	28,673	43,762	87,531	112,008	119,332	7%

In 2017 the growth in the number of BEV passenger cars has increased. At the end of 2016 the growth in the number of this type of vehicle was 40% in comparison to the number at the end of 2015. At the end of 2017 this growth increased to 61% in comparison to the number at the end of 2016. In 2017 the number of PHEV passenger cars decreased for the first time (1% decrease in comparison to the end of 2016). The sum of the number of BEV and PHEV passenger cars increased 316% in comparison to the end of 2013 and 7% in comparison to the end of 2016.

### 2. Registrations per month of BEV and PHEV passenger cars in 2017

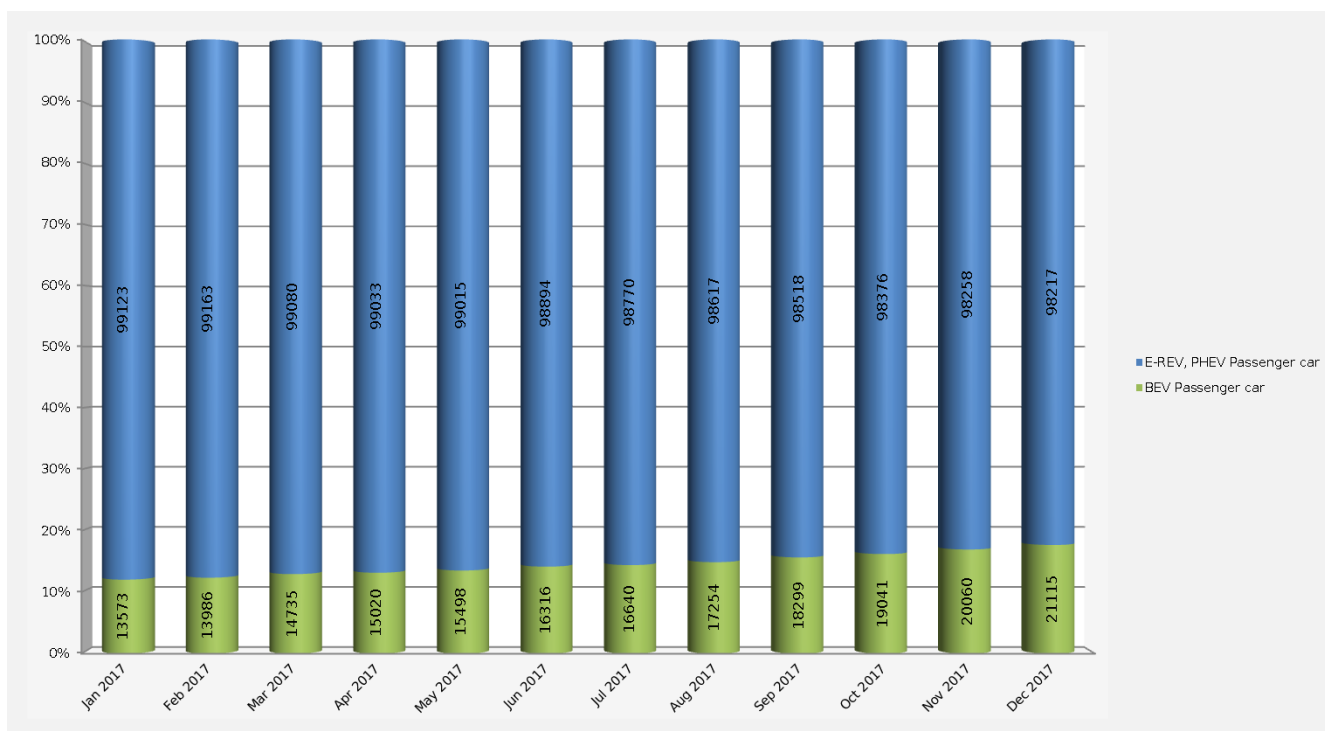
The next graph shows the cumulative number<sup>2</sup> of BEV and PHEV passenger car registrations up to and including the end of each month in 2017<sup>3</sup>. The ratio between the BEV and PHEV in each month is being expressed in a percentage (Y-axis) and is being indicated by the length of the green (BEV) and blue (PHEV) staves (total per month is 100%). De absolute numbers are printed in the staves.

From the graph beneath can be concluded that the share of BEV passenger cars increased in the course of 2017 (from 12% in January to 18% in December) and the share of PHEV passenger cars decreased (from 88% in January to 82% in December).

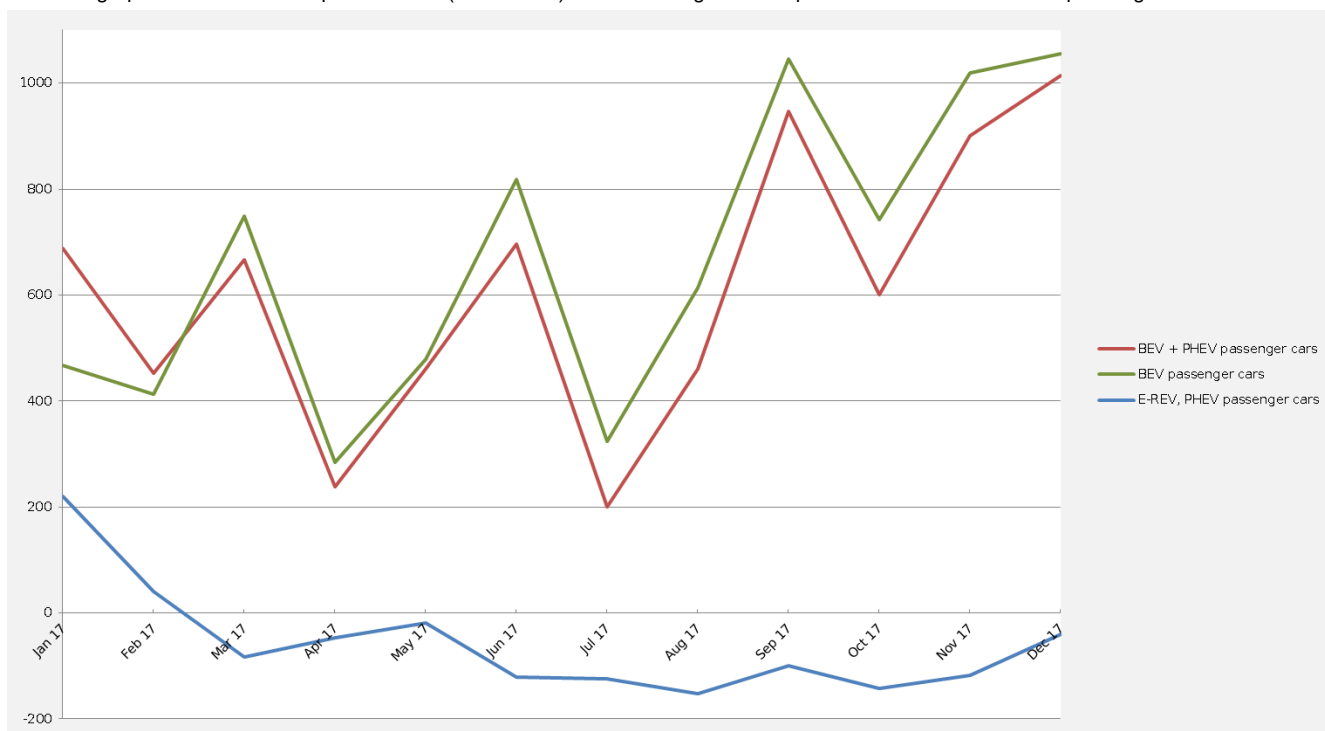
<sup>1</sup> Range-extended vehicles included.

<sup>2</sup> On balance: the balance of increase due to new registrations and decrease due to export, theft, etc.

<sup>3</sup> Source: Dutch Road Authority, edited by Netherlands Enterprise Agency (RVO.nl)



The next graph shows the development of the (on balance) number of registrations per month of BEV en PHEV passenger cars <sup>4</sup>.



In this graph you can see how much the number of registrations differs from one month to the next. On balance the trend in the number of BEV passenger cars is an increasing one. From march onwards, on balance more PHEV passenger cars left the Netherlands than were newly registered.

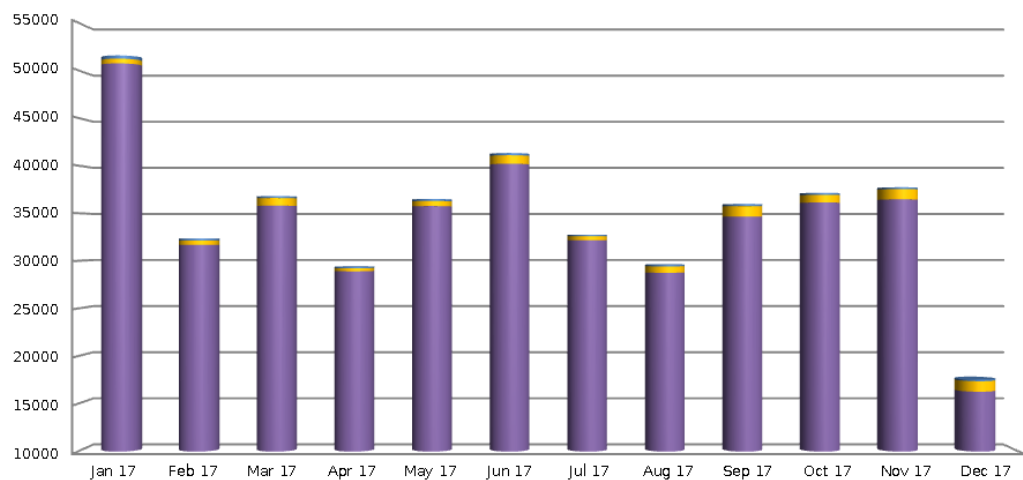
<sup>4</sup> For each month (not cumulative) the numbers in this this graph reflect the balance of increase due to new registrations and decrease due to export, theft, etc.



### 3. BEV and PHEV new passenger cars in proportion to all new passenger cars registrations

BEV and PHEV in proportion to (i.p.t.) all new passenger car registrations <sup>5</sup>	All new passenger car registrations	New registrations of BEV passenger cars	% BEV i.p.t. all passenger cars	New registrations of PHEV passenger cars	% PHEV i.p.t. all passenger cars	New registrations of BEV + PHEV passenger cars	% BEV + PHEV i.p.t. all passenger cars
Jan 2017	51,536	490	1.0%	342	0.7%	832	1.6%
Feb 2017	32,329	453	1.4%	206	0.6%	659	2.0%
Mar 2017	36,789	809	2.2%	195	0.5%	1,004	2.7%
Apr 2017	29,360	319	1.1%	139	0.5%	458	1.6%
May 2017	36,484	526	1.4%	212	0.6%	738	2.0%
Jun 2017	41,309	889	2.2%	237	0.6%	1,126	2.7%
Jul 2017	32,735	406	1.2%	165	0.5%	571	1.7%
Aug 2017	29,584	663	2.2%	175	0.6%	838	2.8%
Sep 2017	35,964	1,101	3.1%	219	0.6%	1,320	3.7%
Oct 2017	37,130	800	2.2%	211	0.6%	1,011	2.7%
Nov 2017	37,713	1,075	2.9%	191	0.5%	1,266	3.4%
Dec 2017	17,528	1,096	6.3%	153	0.9%	1,249	7.1%
<b>Total 2017</b>	<b>418,461</b>	<b>8,627</b>	<b>2.1%</b>	<b>2,445</b>	<b>0.6%</b>	<b>11,072</b>	<b>2.6%</b>

In the table above the month-by-month development in the number of new registrations of BEV and PHEV passenger cars is being related to the new registrations of all passenger cars. Over the year 2017 2.6% of the new registrations of all passenger cars consisted of BEV and PHEV passenger cars. The following graph shows the month-by-month development of the registrations of BEV (yellow), PHEV (blue, hard to see because of small numbers) passenger cars and the amount of registrations of all passenger cars excluding BEV en PHEV passenger cars (purple)<sup>5</sup>.

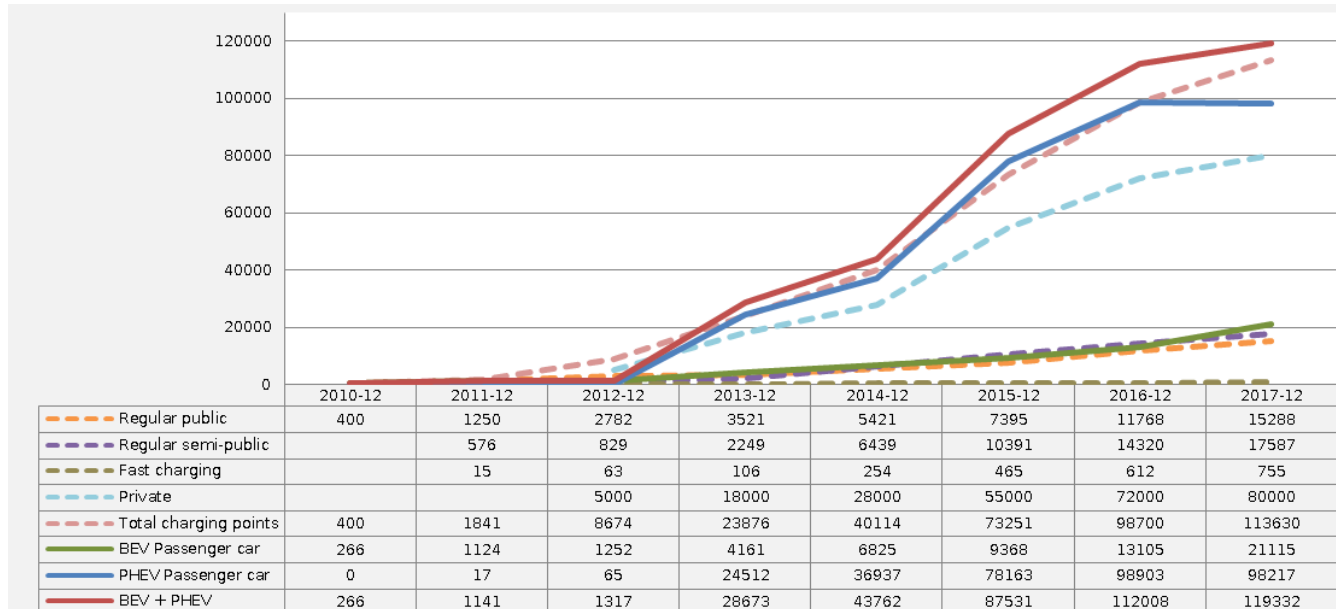


	01 2017	02 2017	03 2017	04 2017	05 2017	06 2017	07 2017	08 2017	09 2017	10 2017	11 2017	12 2017
PHEV passenger cars	342	206	195	139	212	237	165	175	219	211	191	153
BEV passenger cars	490	453	809	319	526	889	406	663	1101	800	1075	1096
All passenger cars, excluding BEV en PHEV	50704	31670	35785	28902	35746	40183	32164	28746	34644	36119	36447	16279

<sup>5</sup> Source: all passenger cars: Bovag/Rai ([www.bovag.nl](http://www.bovag.nl)), BEV and PHEV passenger cars: Dutch Road Authority, edited by Netherlands Enterprise Agency (RVO.nl). The numbers of new registrations of all passenger cars per month (Bovag/Rai) are not being corrected for elimination by theft, export, etc.. To avoid a biased image of the relation between all passenger car registrations and the registrations of BEV and PHEV passenger cars, the numbers of the BEV and PHEV registrations are without correction for theft, export etc. as well. In this respect the numbers here differ from those in the monthly published EV statistics overview. On a year basis Bovag/Rai gives a corrected registration number. For 2017 that corrected number is: 414.538, which is 3.923 less than the sum of the individual uncorrected month-by-month registration numbers.

#### 4. The development of the number of BEV and PHEV passenger cars and charging points

This graph shows the development of the cumulative number of registrations of BEV passenger cars in comparison to PHEV passenger cars. In this graph the development in the cumulative number of charging points is being indicated as well (dotted lines)<sup>6</sup>.



The development of the total number of charging points (pink dotted line) approximately keeps up the pace of the development in number of BEV + PHEV passenger cars (red line).

#### 5. Top 12 BEV en PHEV passenger cars in 2017

Brand-Model	BEV or PHEV	Number Dec 2016 <sup>7</sup>	Number Dec 2017 <sup>7</sup>	Rank based on number of registrations dec 2017	In- / decrease	Rank based on in / -decrease
Tesla Model S	BEV	6,049	8,028	4	1,979	1
Tesla Model X	BEV	422	1,669	10	1,247	2
Volkswagen Golf	BEV	254	1,220	11	966	3
Renault ZOE	BEV	1,377	2,304	7	927	4
Hyundai Ioniq	BEV	100	993	12	893	5
BMW I3	BEV	970	1,776	9	806	6
Nissan Leaf	BEV	1,757	2,123	8	366	7
Volkswagen Golf	PHEV	10,691	10,884	3	193	8
Volkswagen Passat	PHEV	7,773	7,909	5	136	9
Mercedes Benz C350 E	PHEV	6,226	6,212	6	-14	10
Volvo V60 Plug-in hybrid	PHEV	15,804	15,733	2	-71	11
Mitsubishi Outlander	PHEV	25,984	25,134	1	-850	12

The table above consists of the top 12 BEV and PHEV passenger cars in 2017. You can see for example that the Mitsubishi Outlander has by far the highest number of registrations. But at the same time the amount of registrations of this car has decreased the most (-850) in the course of 2017. Of the registration of BEV passenger cars the Tesla Model S was most common (8,028) and this car showed the highest increase (1,979) in 2017.

<sup>6</sup> Source vehicles: Dutch Road Authority, edited by Netherlands Enterprise Agency (RVO.nl); Charging points: Based on data by stichting e-laad, EV-Box B.V., NUON and Essent, The New Motion (data up to 31-10-2012) and Oplaaipalen.nl (starting with data as of 30-11-2012). Up to 28-02-2014 the assumption is made that charging points from e-laad, Nuon and Essent are public and the others semi-public. As of 31-03-2014 Oplaaipalen.nl states whether charging points are public or semi-public. Private charging points: Estimation based on research in 2012 and further estimation and extrapolation for following years.

<sup>7</sup> Each number reflects the cumulative balance of increase due to new registrations and decrease due to export, theft, etc..