



## 28.1 Major Developments in 2017

EV sales grew by 46 % from 2016 to 2017. Several new models entered the market in 2017. Traditionally BEVs have represented the larger share of EVs sold in Ireland. However, this has become increasingly challenged as the number and range of PHEVs available is steadily increasing. In the BEV market, there is still not enough depth and variety to the vehicles on offer. For instance the Tesla Model S represents an ideal family sized car, but it is too expensive to gain wide scale adoption in Ireland. The Leaf and the Ioniq represent the most prominent BEV options in the Irish market.

The Government established the Low Emissions Vehicle (LEV) Task Force to assess ways to increase the uptake rate of lower emission vehicles, which examined market subsidies and infrastructure for EVs. As sales of EVs continued to grow in 2017, progress is still slow with respect to ownership issues surrounding the existing public charging infrastructure.

### 28.1.1 Policies and Incentives

The primary support mechanisms for the EV market include a capital grant of up to 5,000 EUR and Vehicle Registration Tax relief of up to 5,000 EUR for BEVs. PHEVs receive the same grant amount but only receive VRT relief of up to 2,500 EUR. Accelerated Capital Allowances are provided to commercial purchasers of EVs.

Domestic charge points were being installed free of charge for the first 2,000 EV purchasers of new EVs by ESB Ecars (a company which belongs to the same group as the Distribution System Operator). The charge point and installation is valued at approximately 900 EUR. ESB stopped providing this incentive at the end of 2017, but the scheme has continued in 2018 as a grant of 600 EUR per installation by the Sustainable Energy Authority of Ireland (SEAI).

## 28.2 HEVs, PHEVs and EVs on the Road

The cumulative number of Passenger EVs (BEV and PHEV) on Irish roads was 3,580 vehicles as of the end of 2017. Imports of vehicles from the UK were

significant again in 2017 with good exchange rate and availability of low cost EVs being a key factor.

### 28.3 Charging Infrastructure

Table 1 indicates the current number of chargers available at publically accessible locations in the Republic of Ireland. Development activity was relatively low for the national infrastructure in 2017 apart from replacement of early unreliable infrastructure with more reliable units. Some Chademo only Fast Chargers have also been changed out with triple headed units which supply CCS and Fast AC along with Chademo. Tesla have introduced a number of superfast charger stops around the country with little fanfare.

Charging infrastructure is also available in Northern Ireland and drivers may roam between and readily access the infrastructure in both parts of Ireland.

ESB also introduced an enhanced charge point management system, now powered by infrastructure software provider Driivz. The system allows ESB to monitor the availability of the charge point network and to remotely operate charge point units in the field, as well as the ability to carry out fault diagnoses and repair.

Furthermore, the system feeds real time information into the charge point map and app enabling drivers to better plan their journey.



Figure 1: Charging infrastructure future ownership and operation under discussion in 2017  
(Source: ESB Ecars)

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Table 1: Information on charging infrastructure in 2017 (Data source: ESB Ecars 2016 data - no significant development in 2017, Level 1 includes publically accessible non-domestic chargers only, AC Fast Charger may be used in parallel with CHAdeMO or CCS)

<b>Charging Infrastructure on 31 December 2017</b>	
<b>Chargers</b>	<b>Quantity</b>
AC Level 1 Chargers (non-domestic)	107
AC Level 2 Chargers	700
Fast Chargers (<=50kW)	79
Superchargers (Tesla only <=120kW)	32*
Inductive Charging	1
<b>Totals</b>	<b>464</b>

\* charger data is taken from Tesla website

Table 2: Distribution and sales of EVs, PHEVs and HEVs in 2017 (Data source: Department of Transport, Tourism & Sport and SIMI)

<b>Fleet Totals on 31 December 2017</b>					
<b>Vehicle Type</b>	<b>EVs</b>	<b>PHEVs</b>	<b>HEVs</b>	<b>FCVs</b>	<b>Total<sup>f</sup></b>
2- and 3-Wheelers <sup>a</sup>	31	2	17	n.a.	39,873
Passenger Vehicles <sup>b</sup>	2,718	862	20,295	n.a.	2,066,112
Buses and Minibuses <sup>c</sup>	0	0	1	n.a.	11,953
Light commercial vehicles <sup>d</sup>	100	4	56	n.a.	312,628
Medium and Heavy Weight Trucks <sup>e</sup>	n.a.	n.a.	n.a.	n.a.	36,415
<b>Totals without bicycles</b>	<b>2,849</b>	<b>868</b>	<b>20,369</b>	<b>0</b>	<b>2,466,981</b>

<b>Total Sales during 2017</b>					
<b>Vehicle Type</b>	<b>EVs</b>	<b>PHEVs</b>	<b>HEVs</b>	<b>FCVs</b>	<b>Total<sup>f</sup></b>
2- and 3-Wheelers <sup>a</sup>	4	0	11	n.a.	1,431
Passenger Vehicles <sup>b</sup>	620	326	4,435	n.a.	131,253
Buses and Minibuses <sup>c</sup>	0	0	0	n.a.	396
Light commercial vehicles <sup>d</sup>	36	2	0	n.a.	24,094
Medium and Heavy Weight Trucks <sup>e</sup>	0	0	0	n.a.	2,245
<b>Totals without bicycles</b>	<b>660</b>	<b>328</b>	<b>4,446</b>	<b>0</b>	<b>159,419</b>

n.a. = not available

<sup>a</sup> UNECE categories L1-L5

<sup>b</sup> UNECE categories M1

<sup>c</sup> UNECE categories M2-M3

<sup>d</sup> UNECE categories N1

<sup>e</sup> UNECE categories N2-N3

<sup>f</sup> Including non-electric vehicles

Table 3: Available vehicles and prices in Ireland (Data source: SEAI - basic entry level price show for each model)

Market-Price Comparison of Selected EVs and PHEVs in Ireland	
Available Passenger Vehicles	Untaxed, Unsubsidized Sales Price in EUR)
Mitsubishi i-MIEV	28,095
Mitsubishi Outlander PHEV	35,137
Nissan Leaf 30kWh	30,073
Nissan ENV200	23,411
Renault Fluence	20,139
Renault Kangoo Van ZE	20,000
Renault Zoe	15,514
Citroen C-Zero	25,183
BMW i3 BEV	30,668
BMW i8 PHEV	101,342
BMW 225xe PHEV	35,131
BMW 330e PHEV	33,880
VW eGolf	30,216
VW Golf GTE PHEV	33,431
VW Passat GTE PHEV	34,349
Audi A3 E-Tron PHEV	33,431
Volvo V60 PHEV	47,807
Volvo XC90 PHEV	58,045

## 28.5 Outlook

The LEV Task Force will report with its main recommendations to the Government in 2018. It is expected that the Government will introduce several more subsidies in order to encourage greater growth of the EV market. More developments are expected in terms of vehicle driving range and consumer choice. The driving cycle (NEDC) is due to change to the WLTP which will have a significant impact on reported driving range and CO<sub>2</sub> emissions figures for PHEVs.

A period of transition will be required for the consumer and also there is an opportunity to revise the vehicle tax mechanisms to further enhance the uptake of EVs. European manufacturers must plan for post 2020 CO<sub>2</sub> regulations which are likely to require a percentage reduction on their 2021 figures. However, significant risk exists for a disconnect between progress on CO<sub>2</sub> targets before and after the change over to the WLTP drive cycle.