Deployment of electric vehicles (EV) in the EU is gaining momentum: the number of sold cars rose from 760 in 2010 to more than 70,000 in 2014 and the trend continued in the first half of 2015, according to a new JRC report. The choice of models went from 3 to nearly 30 in the same period. The share of electric vehicles produced in the EU has also expanded, increasing from 30% (of EV registered in the EU) in 2011 to 65% in 2014.

The new JRC report carries out a comprehensive analysis of electric vehicles in the EU over the last five years. It finds that the EU is in transition from testing and experimenting towards full scale commercialisation as more models hit the road. However, it also emphasises that market deployment is still dependent on support policies and vulnerable to changes in such support. According to the recommendations, support measures should be based on technology neutral criteria, such as CO2 and other pollutant emissions, or energy efficiency. These support measures could be gradually reduced when further cost reduction for electric vehicles or other fuel saving technologies kick in and
they become a regular choice option for the mainstream market.

In terms of EU countries, the Netherlands and France have the highest number of electric vehicle registrations in the period 2010-2014, while the Netherlands and Estonia have the largest shares of registered EVs on the passenger car market – between 1% and 2%. This is due to strong financial incentives, which have led to registration peaks. Member States with low or no incentives display low numbers of registrations and EV shares on the market.

The report looks into both battery electric vehicle (BEV) and plug-in hybrid electric vehicle (PHEV) markets of passenger cars and light commercial vehicles. While PHEVs are mostly present in the larger car size segment, battery electric vehicles are usually smaller size cars. Also, most of the current plug-in hybrid electric vehicle models offered derive from conventional (internal combustion engine propelled) car models. The number of battery electric vehicles models, derived from conventional car models, is increasing. This is an indication for a beginning of their mass commercialisation in the EU. It can be expected that the number of models offered will continue to grow in the future.

Higher purchase costs for electric vehicles, mainly because of the significant cost of the traction battery, seem to remain an important barrier for a larger uptake. Nevertheless, recent studies indicate that battery costs may decline faster than originally anticipated in literature. This could help to further decrease the cost gap between electric and conventional cars and hence substantiate the further market increase.

**Background**

The report supports the European Commission’s priority related to Energy Union [3]. The proposal foresees further diversification of Europe’s natural gas market, modernisation of the electricity market and energy efficiency improvement through the use of renewables and other alternative types of energy. Under the section “Towards an energy-efficient, decarbonised transport sector”, the Commission highlights that “Europe needs to speed up electrification of its car fleet and other means of transport and become a leader in electro-mobility”.

So far, various forms of incentives and support policies have been tested in Member States. Lessons learnt from them should be applied for the upcoming development of national policy frameworks that become mandatory in 2016 as part of the directive on the deployment of alternative fuels infrastructure (EU, 2014) [4]. Especially the provision of the Directive for cooperation among member states for the development of their national policy frameworks should encourage coherent and coordinated approaches.


**Links**