

Electric mobility in Barcelona: going slower than it was foreseen

We have been listening for decades that the fossil fuels are coming to an end and, at last, now it seems that we have a valid alternative to the conventional vehicle.

Electrical cars increase their presence in our cities and their performances resemble more and more to the ones of the fuel engine vehicles. To this it must be added other undeniable advantages such as the fact that they do not contribute to air and acoustic pollution.

Besides, more than one third of the energy consumed in Spain takes place in the transport sector, and it depends on more than ninety percent of fossil fuels. Being able to make an energy transfer to electric mode provides a unique opportunity. Spain must import oil, while the electrical power required for these vehicles could be produced in its own territory through renewable sources.

The new European regulations on emissions from combustion engines also seem to ensure the road to success for this technology. Car manufacturers have been



Signals for e-vehicles, more common everyday in our cities



Exhibition of electric cars in Barcelona

quick to offer hybrid or electric models in all their ranges.

And, however, although the figures show that the electric vehicle begins to generate a significant amount of business, it does not seem that it is being deployed according to the optimistic initial forecasts based on the advantages in comparison to the conventional vehicle. Sales figures do not stand out yet. In Spain, only about 1400 electric cars (adding plug hybrids) were sold in 2014. A figure that, even though it means an increase of more than 30% compared to the figures of the previous year, is very low compared to the case of France. In the neighboring country, which has a similar population size to the Spanish, the number of electric vehicle sales exceeded the ten thousand units in the same period of time. One of the causes that point to the success of the French case is in the important subsidies to the purchase of this type of vehicle. And it is expected that the numbers will increase during this year, due to the implementation of the *Superbonus*, which grants subsidies of 10.000 Euros in the purchase. To these must be added the quantities that give every region to boost the purchase of electric vehicles.

At Spanish level, certain initiatives must also be highlighted for the promotion of the implementation of the electric car. One of them is the modification of the Horizontal Property Act, according to which, for the installation of a domestic charging point into a community parking, is no longer necessary to count with the approval of the rest of the owners. It is enough to inform the President or administrator of the estate about the intention to install it.

And, to date, it seems indispensable to have a domestic charging point if an individual wants to have an electric vehicle. In the case of Barcelona, a city that has an important public network of electric charging points, the truth is that these are underused. This is partly because of the few electric vehicles that are circulating by the moment, and in part because the present owners opt by charging the battery at home and their mobility needs make unnecessary the recharge at mid-day.

There is no doubt that the autonomy of the batteries as well as the price of vehicles are the main factors that contribute to make the sector not to take off definitely. Great demands of autonomy choose conventional vehicle,

to avoid the risk of being stranded without battery. As for the price, also in Spain there are aids for the purchase, although they have not been quite well widely advertised.

The numbers say that it is in Madrid where more electric vehicles were sold last year. In fact, it is



Charging signal for e-motorbikes in Barcelona



Advertising of free tolls for e-vehicles

known that 15% of electric vehicles sold in the country correspond to employees of Endesa, the main power company in the country, which has launched a campaign with incentives among employees if they accept the change from conventional to electric vehicles, and whose headquarters are located in Madrid. However, it is in Catalonia, where sales growth has been greater, proving that subsidies and other incentives that have been carried out from the Catalan Government have been effective.

Among the measures promoted by the Generalitat de Catalunya, there is the novelty of free tolls for this type of vehicle. Also it has started up a grant for the purchase of electric vehicles. It is mainly directed to fleets, but individuals are also eligible. This grant varies depending on the characteristics of the applicant and of the vehicle that is going to be bought, but it can be from 2000 to 2500 Euros or 20-25% of the value of the vehicle. Also we should stand out some of the initiatives of the city of Barcelona, as the start-up of LIVE platform or actions as the alliance with the manufacturers for the installation of fast charge points compatible with all standards. In any case, in this context, it would seem that the deployment could be much easier in the sector of lighter vehicles, such as scooters. They are smaller vehicles and, therefore, more economical and with a demand of autonomy lower than for the cars. But, although it is expected that figures for 2015 will show a boom in sales of electric motorcycles, nor does it seem that they will eventually establish themselves at the speed that initially had been foreseen. Why is this happening?

For Ramón Pruneda, from the municipal agency Barcelona Activa and President of LIVE, it is very useful precisely the comparison with the electric car to understand why the two-wheel market remains quite stalled. For example, he points out that the difference in the cost between buying an electric motorcycle and one of combustion is very large. If you can have a combustion scooter for 1500 Euros, you must disburse about 4000 to make it electric. In the



The presence of electric motorbikes is growing but it is going even slower than the cars'

of cars, on the other hand, the difference of price between combustion and electric is not so wide. It is of about 15-30% and experts estimate that the investment is recovered in about three or six years. It does not help either that banks (nor even the manufacturers themselves) do not provide a financing service like leasing for electric motorbikes. And this is because the novelty of the market does not set yet a residual value for these products.

Furthermore, the consumption of fuel which has a scooter is low compared to what consumes a car, so saving in consumption does not seem to be a decisive factor when deciding on the purchase of one electric. Finally, in the case of cars, and as mentioned, the big brands have entered in the game. Not so in the case of motorcycles. As an anecdote, we can explain that precisely the lack of experience of the motorcycle manufacturers when it comes to the electric versions was palpable with the purchase of thirty electric motorcycles that recently acquired the city of Barcelona for the Municipal police, in a clear bid for a more sustainable mobility. The manufacturer had not planned yet how should feed the functioning of the siren and the other accessories of a police vehicle. The result is that the bike needs two plugs: one for the motor and one for accessories.

And then? What steps must we follow to implement the electric vehicle and, specifically, the motorcycle? One of them is undoubtedly visibility. In this sense, Barcelona has made much work. On October 16th and 17th, within the framework of the week of sustainable mobility, a new edition of Expoelectric was held. This fair, which was installed in a central street, is the largest electric mobility event in the South of Europe. A good number of visitors passed

through its different exhibitors and it could be seen that, what in the past, had been raised as an informative area of e-mobility, is now also a showcase where sales are closed. The public is becoming more expert in e-mobility. They do not only want to learn about and test the vehicles but attendees come with the intention of having better advice about the possibility of purchase.

However, the fair still has a large number of activities designed for children. The organizers of the exhibition are convinced that real change towards electric mobility will occur in the next generations. The adults of the future will observe the electric mobility as a normal choice, they will not be the current early-adopters.

It is also in the hands of institutions the imposition of electric mobility. If cities are firmly committed to a sustainable mobility, they will have to put siege to the conventional vehicle. In the case of Barcelona, it is a city of more than



The fair Expoelectric was held in October in Barcelona

100,000 inhabitants that exceeds the limit of permitted emissions, so it is now inside the special atmospheric environment protection area. To get a decrease of polluting emissions it is needed to reduce transit of combustion vehicles, since these are major generators of such emissions. The Barcelona City Council has already taken an important step with the approval, last March, of the Plan of sustainable urban mobility, in which travels on foot, bicycle and public transport snatch the vehicle the unpunished prominence that it enjoys in many other cities.

Also, in Barcelona it was recently signed a manifesto "for the right to mobility" that collects the purpose of a dozen of Spanish cities about working together to change the paradigm of how we move and live in our cities. In theory, everyone agrees how it should be modified, but when it comes to implementation entails many criticisms.

If all agree that electric mobility is here to stay, only time will tell us if it gets a central role in a more rapid manner or if it will continue to deploying with dropper as so far.



Air pollution in Barcelona: a problem that has to be solved. Electric mobility gives a chance for it