











Mancha				
Cataluña	3309596	375362	558722	613187
Comunidad Valenciana	2356007	267209	397738	436511
Extremadura	544636	61771	91945	100908
Galicia	1451890	164668	245106	269000
Madrid, Comunidad de	3256265	369313	549718	603306
Murcia, Región de	685074	77698	115653	126927
Navarra	299536	33972	50567	55497
País Vasco	946694	107370	159819	175399
Rioja, La	134699	15277	22740	24956
<b>TOTAL VE</b>	<b>20286429</b>	<b>2300811</b>	<b>3424727</b>	<b>3758580</b>
<b>% Charging scenario</b>	<b>100,0</b>	<b>11,3</b>	<b>16,9</b>	<b>18,5</b>

The percentage of vehicles that can be replaced in each of the recharging scenarios considered is 11.3% of the existing vehicle fleet for slow recharging, 16.9% for accelerated recharging and 18.5% for fast recharging, see table 10.

## 7. Conclusion

The implementation of electric vehicles reveals a complex reorganization of the Spanish electricity production system due to the geographical seasonality of electricity demand. Therefore, the easiest way to implement EV on a massive scale in Spain is by means of slow recharging according to the average monthly energy available, based on the average monthly demand. With this scenario, recharging is carried out in 6-hour hourly intervals, reaching up to 11.3% replacement of conventional vehicles by electric vehicles. However, a maximum replacement of 18.5% of the conventional vehicle fleet could be reached with the rapid recharge scenario, although in this case, a process that should be legislated with greater definition should be considered in the area of recharge infrastructure, recharge management systems and production system management. The analysis of each of the recharging scenarios leads us to a maximum replacement capacity of 18.5% of the current vehicle fleet, which limits the approach of planning a massive introduction of electric vehicles. The large-scale deployment of electric vehicles would require a reorganization of the electric power generation system on the one hand, and the distribution network on the other.

## Acknowledgement

This work was supported by project PGC2018-098813-B-C33 (Spanish "Ministerio de Ciencia, Innovación y Universidades"), and by European Regional Development Funds (ERDF)

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