



for all the companies participating in the CHAdeMO association: they get a guarantee that their technology will be used in the following years. Instead

>50 DIFFERENT CHADEMO CHARGERS

of fighting to impose their standard, which would be a barrier to the rapid development of the market, they need to convince the consumer in terms of technical performance and price. With the obstacles to the competition being alleviated, the race for innovation is very fierce: more than 50 companies actually manufacture different DC charging stations with the standard CHAdeMO, and the

technology is improving at a fast pace. The company Fuji recently launched a low cost charger: by lowering the voltage to 20kW, it makes the usage price go down with an increase in charging time of less than 7 extra minutes. Inevitably, this will pull the prices in the market down. Western car manufacturers, outpaced in this first round, tried to win the second one by establishing their own competitive standard, Combo. Developed by the biggest automotive manufacturers, such as BMW, Volkswagen, or General Motors, this initiative is an attempt to catch up the lost time against the Japanese corporations. Although there are still only a few cars compatible with Combo charger, Combo managed to be certified as a standard in the US and in Europe. What's more, all public DC fast charging station in Europe should necessarily be equipped with a Combo plug from 2017, something which is not the case for CHAdeMO.

Still, due to the fact that many components are common between the two standards,

many European manufacturers have responded by proposing two plugs in their charging station: one Combo, and one CHAdeMO, with an extra cost of less than 5 to 10% of the total charger price. Consequently, every major stakeholder in the European electric vehicle market finds its own interest: the companies following one of the two standards because they will be well represented in the charger network; the European Union because of the healthy competition environment it managed to provide to the electric vehicle market by permitting the two standards to coexist; and the consumer that can buy an electric vehicle without the fear that the standard they chose will be out of the market the next year. Thanks to the massive presence of CHAdeMO in the market, both in terms of already existing infrastructure and the wide range of compatible cars, it can not be ignored and has still an important role to play. But will we be able to come to the same conclusion in 10 years? When the biggest Western manufacturers have caught up and proposed competitive