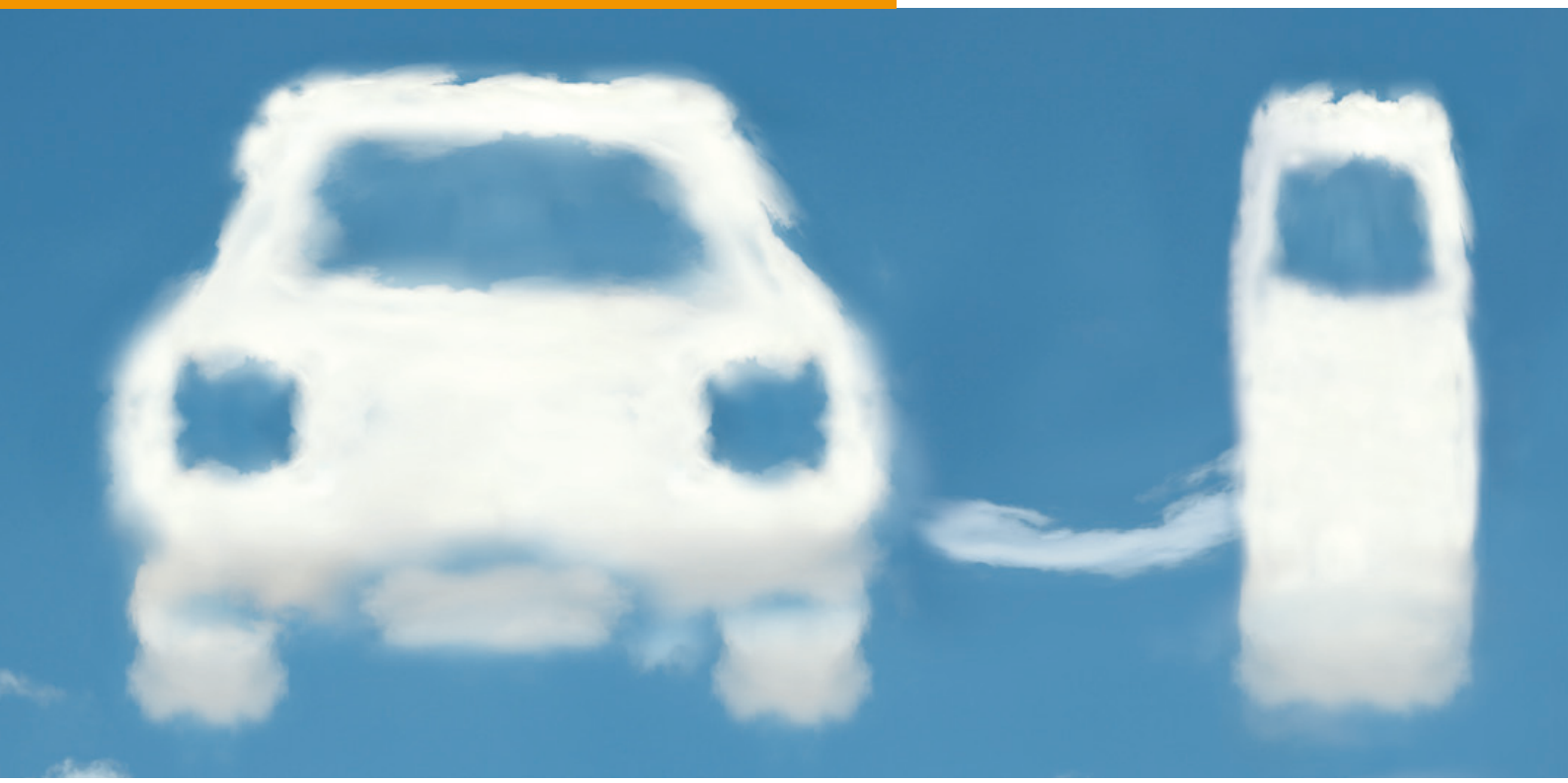
Combined Charging – the universal charging system



The vast majority of global automotive manufacturers have jointly developed a universal charging system for electric vehicles for global deployment – the Combined Charging System. This new concept replaces today´s regional solutions which cause an expensive coexistence of multiple charging systems. Vehicles featuring the new technology represent the future of vehicle fast charging and maximize the integration into future smart grids.

Benefits of the Combined Charging System

The Combined Charging System is the only technology combining established AC charging solutions with ultra-fast DC charging in a single system: One combined charging inlet per vehicle, one integrated charge control logic, one implemented charging communication, and one electric architecture for charging. This unique product reduces total cost of ownership for end customers and improves handling. This simple, but robust solution also provides low maintenance costs among other things. The communication technology chosen for charging control supports a smooth integration with smart grids and may be extended by countless additional functions and services. The electric vehicle is easily connected to any IP-based application. The common approach among global OEMs will facilitate the growth of public charging worldwide.

Combined Charging – the universal charging system

Strategic commitment to the Combined Charging System in the U.S.

SAE, the international society of automotive engineers, has developed the Combined Charging System in the U.S. as an incremental extension of the existing AC charging Standard. The Combined Charging System is the US solution for electric vehicle charging – from AC charging to ultra-fast DC charging.

Nearly all global automotive companies support the Combined Charging System including US manufactures Chrysler Group LLC, Ford Motor Company, and General Motors.

Strategic commitment to the Combined Charging System in Europe

ACEA, the European association of vehicle manufacturers, selected the Combined Charging System by using Type 2 and Combo 2 based AC/DC charging interface for all new vehicles types beginning in 2017 for Europe. The strong commitment of both individual automotive manufacturers and automotive associations will establish the predominance of electric vehicles featuring the Combined Charging System in Europe.

All current members of ACEA support the Combined Charging System for Europe: BMW, DAF, Daimler, Fiat, Ford of Europe, General Motors Europe, Hyundai Motor Europe, Jaguar Land Rover, MAN, Porsche, PSA, Renault, Scania, Toyota Motor Europe, Volkswagen, Volvo Cars, and AB Volvo.

Global Deployment of the Combined Charging System

In summary, the Combined Charging System technology enables a common approach to charging Electric Vehicles globally. The reduced infrastructure complexity results in a reduction of costs and improves the ownership experience. The Combined Charging System is technically mature and will be rolled out starting in 2013. Vehicles equipped with AC charging in compliance with the Combined Charging System are already in the market. Vehicles with ultra-fast DC charging based on the Combined Charging System Standard have been announced by BMW, General Motors and Volkswagen for introduction in 2013.