## The potential of electricity-based fuels for low-emission personal cars – Quo vadis electric car?

## Dr.-Ing. Peter Magyar

MPP Consult, Germany IAS Director of Chapter & Membership Development

The development of transportation vehicles is one of the greatest achievements of modern technology. Especially the automobile has become an important part of everyday life because of providing individual mobility for the public. However, the large number of automobiles in use has caused serious problems for the society and has been considered responsible for air pollution, global warming and intensive use of the limited oil resources. The interaction of developers, manufacturers, energy authorities, politics, media and customers is increasing the interest and the pressure on the development of new, green solutions, among others battery powered electric cars hoping to solve all of the above listed problems by using electrical drive train technologies.

Does the electric car really save energy, decrease the carbon dioxide emission and the environmental pollution? Is it really a green solution? What kind of technical, economic, political and customer aspects affect that the recent development does not obtain broad acceptance? Is it possible to change this trend by using renewable energy sources?

To answer these questions, the lecture demonstrates the potential of the economical usage renewable energy sources by replacing natural hydrocarbon-based fossil fuels by synthetic ones. This solution is a considerable advantage as it keeps the existing infrastructure and the existing automobile technology, solves energy storage problems, extracts carbon dioxide from the air and eliminates disadvantages of battery powered electric cars.

