

## Technical Note on Congress on Electromobility, Prague, May 12 - 13, 2011

J. Koloc \*

*Škoda Auto a.s.*

*\*Corresponding author: jaroslav.koloc@skoda-auto.cz*

J. Kovanda

*CTU in Prague*

The 1st International Congress aimed at the problems of electromobility took place at the Czech Technical University in Prague. The venue for this event was the new building of the National Technical Library. The main organizers were the Czech Technical University, and the Faculty of Transportation Sciences, in cooperation with the ITS&S organization.

The rich program contained many contributions from different specializations related to electromobility and electromobiles. Detailed information is available at: [www.electromobility.cz](http://www.electromobility.cz).

The Škoda-Auto a.s. company was one of the congress partners and exhibited the Octavia Green E-car powered by an electric engine for the first time in the Czech Republic. This event attracted great interest, as well as the talks by Mr. Petr Kristl on the “New conditions, facts and challenges in the e-car development process” presented during the “Electrovehicle design” session. The congress participants appreciated the philosophy of electric car development aimed at high value for the customers, as well as maintaining attention to the safety levels. The presented overview of the technical steps and questions is a strong motivation for further technical development, and a big effort of the research teams and students projects is expected in the field of electric cars design. The speaker presented the VW concern’s support of the new types of drive systems with the target zero emissions mobility. Electromobility is becoming a leading topic for our biggest car producer which utilizes modern trends in automotive design.

The technical data of the displayed Škoda Octavia Green E-car include information about the type (lithium-ion), mass (315kg) and position of the traction accumulators, brake recovery system, engine power (60 kW), and vehicle range (150 km). The roof solar cells help to keep the air ventilation in a parked vehicle.



It is necessary to stress that the continuous development of conventional vehicles, their transmissions and propulsion systems, combustion process, car body design, etc., bring with them interesting achievements in both a vehicle's dynamics and in environmental protection. The intelligent systems help to increase the active and passive safety, ride comfort, and to reduce emissions. There are many examples, such as fuel consumption reduction (and, consequently, CO<sub>2</sub> production) for powerful engines achieved by modern technologies and downsizing, automatic transmission (with a high number of gears) with intelligent control, sophisticated suspension systems, and driver comfort functions. The high ride comfort, low noise and vibrations, good interior ventilation and automated air condition, and easy vehicle systems interface supported by sensors are significant contributions to transport safety, due to the higher attention level of the driver.

The combination of electric vehicles and modern vehicle systems based on current or unconventional energy resources (and innovative fuels) bring new challenges for future transport systems. The short-term future shows which segment of road transport is suitable for intensive development in electromobility.