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# TÜV SÜD e-mobility - making the future safe

## (brief abstract)

### **E-mobility – we make the future safe**

The mobility concept of the future focuses on electric-powered vehicles. Manufacturers in Asia and the U.S., as well as in Europe, are developing new electric vehicles in order to capture future global market share. The more intense the competition, the more important attributes such as quality and safety become. TÜV SÜD is facing up to this challenge, side-by-side with its customers. With proven competence and any years of experience, TÜV SÜD advises, tests and certifies its customers in the field of electro-mobility.

### **Homologation and certification of electric vehicles**

TÜV SÜD is accredited for more than 300 national and international testing methods. Thus we can provide homologation and certification services reliably to vehicle manufacturers and their suppliers in industrial regions throughout the world. Our services range from the certification of prototypes and small series to the homologation of mass production runs.

### **The battery: A core component of an electric drive**

TÜV SÜD is very well prepared to check battery safety in electric vehicles: we have our own testing laboratories in Singapore, Great Britain, China, and the United States, as well as in Germany. Since battery safety is one of the main factors in the overall safety of electric-powered vehicles, all kinds of batteries need to be tested in close collaboration with motor-vehicle and battery manufacturers and their suppliers. TÜV SÜD tests individual cells, and also battery modules and packs, to globally accepted test standards, as well as to specific customer requirements.

### **Safe battery-charging infrastructure and certification of recharging units**

Our services range from advice on site selection, via testing and acceptance of the installation, to commissioning. At some sites, it is also a good idea to investigate the feedback effects of battery-charging units on the local power grid. Safety experts from TÜV SÜD also advise manufacturers of electrical recharging units during development and international certification.

### **Training creates safety in high-voltage technology**

The introduction of electric drives for road vehicles is a major change in technology in the automotive sector. It includes the use of high-voltage components at a couple of hundred volts in the motor vehicle and innovative technologies for energy storage. This includes not only the battery and the motor, but also the entire electronic controls, which have to handle high voltages and currents on the secondary side, as well. This involves lethal risks if repairs are not performed properly, both to the garage staff and to the customer. Improper handling of new technology batteries can also cause a drastic reduction of their service life and performance. To enable their customers to meet this new challenge with the necessary professional skill, TÜV SÜD offers an extensive set of courses and training programmes in high-voltage safety and in handling lithium-ion batteries.



*TÜV SÜD Engineer doing on-site testing*

*TÜV SÜD E-mobility service website.*

[http://www.tuev-sued.de/home\\_en/cross-sector\\_services/e-mobility](http://www.tuev-sued.de/home_en/cross-sector_services/e-mobility)

*TÜV SÜD LOGO*

