



SAXONY-ANHALT

Investment and
Marketing Corporation

ELECTRIC MOBILITY



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COMPETENCY IN ALTERNATIVE DRIVES AND BATTERY TECHNOLOGY

The future of mobility is becoming increasingly electrical. However,

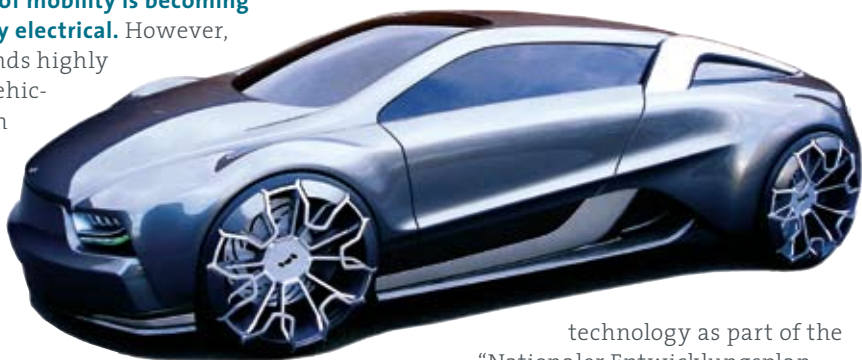
this demands highly efficient vehicles that can be driven by alternative energies. The automotive industry is now focusing its attention on various concepts, ranging from hybrid to purely electric drives.

Passenger cars are responsible for around 12 % of the CO₂ emissions in Germany. Even with today's energy mix the electric drive is a more efficient alternative and could play a major role in considerably reducing CO₂ emissions.

The contribution to environmental protection is particularly evident when the required electricity is generated from renewable energy sources, e.g. wind or solar energy.

The German Federal State of Saxony-Anhalt is a world leader in the field of renewable energies. Today, about 40 % of the power required in Saxony-Anhalt is derived from regenerative sources. And this is precisely where electric mobility offers excellent approaches, in particular the intelligent utilization of batteries in electric vehicles as power storage systems to boost power supply efficiency.

The German government has recognized the strategic importance of electric mobility and promotes the market preparation and commercial launch of this new



technology as part of the “Nationaler Entwicklungsplan Elektromobilität” (National Development Plan Electric Mobility). The government's second economic stimulus package alone will provide 500 million euro to promote electric mobility.

Saxony-Anhalt, also known as the Early Riser State, is a pioneer in this field. Due to the targeted promotion and support of cost-intensive research and development activities, Saxony-Anhalt has created the right conditions to attract battery manufacturers and companies from the electric mobility sector to this region of Germany. No matter how multifaceted the challenges appear to be, most experts agree on one thing:



“The battery is the key to electric mobility.”

Matthias Wissmann,
VDA President



Battery testing at FuelCon AG.

Saxony-Anhalt opens Institute for Competency in Vehicle Mobility

A special feature of the “Institut für Kompetenz in AutoMobilität” (Institute for Competency in Vehicle Mobility) is that it enables close cooperation between business and science. This research center focuses, in particular on:

- ▶ The lightweight construction of vehicles and new composite materials
- ▶ The miniaturization of components and assemblies
- ▶ Electric drive and storage technologies

The institute is managed in close co-operation between the University of Magdeburg, regional enterprises and institutions.

Establishment of a battery test center

This test center allows the extensive, battery-specific testing of individual battery cells and battery packs up to 150 kW:

- ▶ Charging and discharging cycles to various standards (DIN, ISO, and IEC)
- ▶ Freely definable load cycles
- ▶ Cyclization and endurance test
- ▶ Battery forming
- ▶ Fully automatic 24/7 operation
- ▶ Ambient simulation (climate and temperature)
- ▶ Shock and vibration tests
- ▶ Battery simulators

Endurance and qualification tests can be carried out in parallel at numerous test stations. Experienced personnel ensure the full availability of the test stations as well as the continuous provision of test results.



Organizing virtual assembly processes is easy at the immersive engineering workstation.

Accumulated know-how at universities throughout Saxony-Anhalt

Otto-von-Guericke University Magdeburg

- ▶ Institute for Mobile Systems
- ▶ Institute for Electrical Energy Systems
- ▶ Institute for Automation Technology

Martin-Luther-University Halle/S.

- ▶ Faculty for Engineering Sciences

Anhalt University of Applied Sciences

- ▶ Departments for Electrical Engineering, Mechanical and Industrial Engineering

VDTC – VIRTUAL DEVELOPMENT AND TRAINING CENTER

In high-tech labs at the VDTC, the virtual development center of the Fraunhofer IFF, researchers collaborate interdisciplinarily with innovative service providers and industry partners. They jointly develop state-of-the-art solutions based on virtual and augmented reality. High-tech developments geared directly toward the needs of clients are produced for the real business world.

NETWORK MAHREG AUTOMOTIVE

MAHREG Automotive has become a brand name for automotive competencies from Saxony-Anhalt and represents 250 companies with 18,000 employees. The core competencies of the companies are grouped in the fields of aluminum alloy casting, high-performance composite materials and plastics engineering.



YOUR PARTNER

- ▶ for site selection
- ▶ for subsidy and financing issues
- ▶ for dealing with authorities
- ▶ for full line project management

*All inquiries are kept strictly confidential.
Our services are free of charge!*

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