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Entering a new era in electric mobility

A new era dawns as electric mobility bridges the gap between luxury and necessity.

By Trevor Hill 1 Oct 2018

Trevor Hill, head of Audi South Africa

Mobility is essential to today's world. We travel to get to work, to go shopping, and to meet friends and fan – in short, effective transport impacts on all aspects of our modern lives. Access to mobility is critical to economic growth and progress, bringing more opportunities and better productivity. At the same time however, growing environmental concerns and a looming shortage of fossil fuels have created tension between our ever-growing demand for mobility and the health of our planet.

Growing populations, increasing urbanisation and economic and social development mean that there are more cars on our roads each day. The knock-on effects of this are greater levels of congestion and longe times spent commuting, which means more stress and higher levels of aggression on the road. Skyrocketing levels of air pollution – to which transportation is one of the leading contributors – has negati effects on both health and climate change, both of which are key issues in global policy agendas.

A new era

So, the writing has been on the wall for some time. The gold standard in automotive technological progres has thus been to achieve a radical reduction of engine emissions and the development of electric cars ha been at the forefront of this charge. We have now entered the beginning of a new era, as more and more these vehicles take to the roads. Electric cars are now at the cusp of the mass market, with a steady strea of new models set to reach the consumer in the future.

The recently launched, Audi e-tron, our first all-electric-drive SUV, at a world premiere in San Francisco, is one huge leap forward in pursuit of our goal. Audi will also bring more than 20 electrified models to the market by 2025, from the compact class to the full-size category. Around a dozen models will be all-electr while the remainder will be plug-in hybrids for emission-free driving on shorter journeys.

Powering this development is ongoing improvement in battery technology, with increasing energy density and lengthened driving ranges possible between charges. Consumers have noted that they feel confident using electric cars for day-to-day use once battery technology can sustain a driving range of 300 or more kilometres, which is now possible.

The Audi e-tron has a range of 400 kilometers, making it ideal for long distance driving. Drivers who charg the e-tron overnight can set off in the morning in full confidence that they won't need to stop at a charging station as they go about their day.

What this technological progress also means however, is that the levels of power and performance achiev by an electric car draw ever closer to those of traditional engines. For anyone who loves high strung, powerful engines and the rush of adrenaline that comes from flooring the throttle on an empty stretch of road, this is no small thing.

At Audi, we are lucky to be surrounded by some of the most exceptional engines ever produced, so few people understand the thrill of an extraordinary driving experience better than we do. So, the holy grail is to achieve this same performance with vastly improved economy.

The Audi e-tron's electric drive has two asynchronous motors, one at the front, one at the rear, with a total output of 300 kW of power. This allows the Audi e-tron to accelerate from 0 to 100km/h in just 5.7 second

The next step

The next step will be the development of electric cars suitable for those who regularly drive long distances entailing further advances in battery technology, and the development of a network of charging stations across the country. The battery for the Audi e-tron is designed to last the entire life cycle of the vehicle. When charged at a high-power charging station at up to 150 kW, the Audi e-tron can be restored to 80% ir less than half an hour. At 22 kW, the Audi e-tron can charge its battery to 100% in around four and a half hours.

For city dwellers, however, the age of electric mobility has well and truly arrived. Rapid advances in technology continue to drive progress; the rise of electric cars is only one of many developments set to transform transportation as we know it, heralding a cleaner, more efficient future.

ABOUT TREVOR HILL

Trevor Hill is the head of Audi South Africa. With over 20 years of global experience with Audi, Hill joins the South African team after spending two years at the head office in Germany heading up the global strategic project of Internationalisation.
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