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• SHAPING THE FUTURE OF MOBILITY

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Creating the Future Innovative Ideas for Mobility

**1.4 million barrels of oil
could be saved per day in the USA
if one third of all vehicles were powered
by Clean Diesel engines.**

**The future is an engineer's task,
Volkswagen stands for this innovative power.**



Editorial



Dr. Ulrich Hackenberg, Member of the Board of Management of Volkswagen Brand with responsibility for Research and Development.

Sustainability is not an empty promise for Volkswagen but a clear company goal – as well as a challenging task for all our technicians. Only with persistent technological progress, and employing creative innovation, will we

secure individual mobility for tomorrow and the day after. The future is an engineer’s task, Volkswagen stands for this innovative power.

Our way to sustainable mobility is based on an intelligent combination of diverse technologies: Electric mobility is of high importance in many regions and Volkswagen will decisively shape its future. Likewise, our highly efficient and clean combustion engines and vehicle concepts show enormous potential. Volkswagen’s Clean Diesel technology is currently experiencing an enormous boost in the USA. Another decisive step is plug-in hybrid technology, the perfect combination of electric and combustion engines. And, with our 1-liter car, the close to mass production study XL1, we are today already proving what is possible technically.

The future will be fascinating. We are shaping it.

Clean Diesel

An Important Future Technology



The Passat has arrived in the USA, and not only in television advertising; since this year, it is being produced there too.

Clean Diesel technology receives the highest praise from an unexpected party. The US Secretary of Transportation, Ray LaHood, judges Volkswagen’s high-tech diesel engine as the central pillar of the environmentally sustainable modernization of individual mobility in the United States. The USA stands on the brink of a new kind of mobility said LaHood and Clean Diesel engines are an essential part of the new strategy for engines in the United States – thanks to Volkswagen’s innovative technologies. “And that is not only because it is the right engine for environmental and climate protection in the USA. Clean Diesel engines also make sense economically.”

“If one-third of all vehicles in the USA were already Clean Diesel vehicles today, we would be saving 1.4 million barrels of oil every day. That is equivalent to the amount of oil we currently import from Saudi Arabia.”

Ray LaHood, US Secretary of Transportation

In spite of the USA’s long term diesel skepticism, the country is now realizing the strengths of this highly efficient technology. Today, every fourth Volkswagen sold in the USA is equipped with a Clean Diesel engine, a clear upward trend. This supports Volkswagen’s strategy to also convince this market that the TDI is the most successful efficiency technology in the world. At the moment, in the USA, Volkswagen’s range includes four models with diesel engines, Audi offers two models with TDI Clean Diesel engines. By 2011, the Passat TDI and Beetle TDI will be joining the fleet and Audi, by 2013, will introduce luxury class diesels, with the addition of the A6 and A8.

“Think Blue.” – A Conscious Decision

With the new “Think Blue.” initiative Volkswagen is supporting environmentally friendly mobility and sustainable individual action. Volkswagen is not only focusing on the development of environmentally friendly products and technologies – as well as resource saving production processes – but also wants to sharpen the public’s awareness. The partnership with the Museum of Modern Art (MoMA) in New York and the concept of the Volkswagen site in Chattanooga, Tennessee, one of the most environmentally friendly automobile factories in the world, are just some examples of this new initiative.



Volkswagen’s Chattanooga production site is more than just a car factory. Located on the roughly 5.6 square kilometer complex is an academy for both education and further education as well as a site for component suppliers.

In Chattanooga up to 150,000 vehicles are produced by 2,000 employees every year and it is setting new standards for resource efficient production. A new lacquering process alone is reducing CO₂ emissions by 20 percent. The water efficiency of the production site satisfies the highest requirements, the energy consumption of the lighting is 20 percent below that of comparable facilities – thanks to LED technology.

The extensive partnership with the Museum of Modern Art adds social and cultural topics to the “Think Blue.” initiative’s agenda. “This partnership expresses our corporate commitment to take responsibility for the environment and for society”, said Prof. Dr. Martin Winterkorn, Chairman of the Board of Management of Volkswagen Aktiengesellschaft. When the partnership with the MoMA was launched, Prof. Dr. Winterkorn arrived in Volkswagen’s new XL1, the most efficient car in the world: The close to mass production prototype only consumes 0.9 liters per 100 kilometers and emits only 24 grams CO₂ per kilometer.



Henceforth, Glenn D. Lowry (left), director of the MoMA, and Prof. Dr. Martin Winterkorn, Chairman of the Board of Management of Volkswagen Aktiengesellschaft, want to provide access to innovations together. In May, the museum and the car company sealed their partnership in New York.

Blue Motion

Consistently Efficient

BLUEMOTION

The label Blue Motion has long become a synonym for sustainability in Europe. It includes:

Blue Motion: Volkswagen's most economical models carry this name.

Blue Motion Technology: Vehicles that are equipped with special efficiency technologies, like the start-stop system.

Blue TDI: The cleanest diesel engines, they already meet Euro 6 standards for the year 2014 today.

TSI Eco Fuel: Low-pollutant natural gas models with additional fuel tank.

The Blue Motion technologies:

TDI: The world's most successful efficiency technology, perfected by Volkswagen.

Start-stop: Saves up to 100 percent of fuel during breaks.

Recuperation: Converts kinetic energy into electric power.

Lightweight construction: The Polo BlueMotion only weighs 1,080 kilograms and it also features modified aerodynamics.

Friction and road resistance: Consistent precision work on all moving parts.

Volkswagen's Blue Motion lineup combines superior dynamics and high utility in a unique way: setting a global benchmark for consumption and emissions with full road capability and at low cost. This makes the Polo BlueMotion the most economical five-seater in the world; with a standard fuel consumption of just 3.3 liters of diesel per 100 kilometers (which corresponds to 87 grams of CO₂ per kilometer). Not only is this good for the environment but also for the wallet in the long run.



Most economical five-seater in the world: the Polo BlueMotion.

Driving the Golf BlueMotion is similarly advantageous: Thanks to its fuel consumption of only 3.8 liters per 100 kilometers (which corresponds to 99 grams of CO₂ per kilometer) it puts itself forward as the most economical car in its class. Another big plus is its enormous range, a mighty 1,447 kilometers in the case of the Golf BlueMotion.



Enormous range: the Golf BlueMotion.

The lineup's latest model is the new generation Passat BlueMotion. Its excellent balance between low consumption and high utility becomes even more apparent in this case: Even the estate edition, with full variability, the Passat BlueMotion consumes 4.3 liters (113 grams of CO₂) and the saloon edition only 4.1 liters (109 grams of CO₂). The Blue Motion lineup in particular reveals the huge progress Volkswagen has already made in reducing consumption. But this only fuels our engineers' desire for further improvements.



Low consumption and high utility: the Passat BlueMotion.

Accelerate

Natural gas is an alternative that is both environmentally friendly as well as suitable for everyday use: The Passat TSI EcoFuel for example comes with both natural gas and conventional fuel optionality. Its 110 kilowatts (150 hp) guarantee sporty performance. In fact, the Passat TSI EcoFuel has mastered the Challenge Bibendum rally track, the world's largest competition for environmentally friendly vehicles, with CO₂ emissions of just 77 grams per kilometer. The Touran TSI EcoFuel is equipped with the same dynamic engine.

Running cars on liquefied petroleum gas (LPG) also reduces the CO₂ emissions and fuel costs: Following the success of the Golf BiFuel and the Golf Plus BiFuel, Volkswagen is now offering the Polo BiFuel which operates using both LPG and fuel – a perfectly balanced and crash test proven technology.

Successful DSG technology

Volkswagen's sophisticated technology increases driving pleasure whilst simultaneously decreasing consumption: The Dual Clutch Transmission (DSG) combines the comfort of an automatic transmission with the efficiency and dynamics of a manual gearbox. This masterpiece of Wolfsburg engineering became a sensational success right from the start: More than 3.5 million Volkswagen Group vehicles have since been equipped with DSG.

Laurels

Drive technology by Volkswagen sets global benchmarks – and for that it is regularly awarded prizes: In 2011, Volkswagen received the prestigious "Engine of the Year" award – for the sixth consecutive time. The 1.4 TSI engine was the distinguished winner. The high-tech power train combines an exhaust turbocharger with a compressor and offers the output of a significantly larger displacement model but with lower consumption and emissions.

Revolution

In the 70's, Volkswagen revolutionized the compact car segment, not only with the Golf but with the Golf D – the diesel principle: For the first time, a diesel was also characterized by its dynamism. Today the Volkswagen Group is the global leader in diesel engine technologies and the latest Golf GTD is, with its 125 kilowatts (170 hp), on a truly sporty track – all the while maintaining its excellently economical running costs.

Success story: The first Golf hit the market in 1974. Today the sixth generation is already on the roads.



Golf blue-e-motion

Full Speed to Electric Mobility



“In the future, the heart of our brand will beat electrically. Our goal is to become market leader by 2018, also in the field of electric mobility.”

Prof. Dr. Martin Winterkorn,
Member of the Board of Management of
Volkswagen Aktiengesellschaft

The electric car will shape the future significantly – and Volkswagen is shaping it from the very top: Volkswagen sets off towards a new era with the Golf blue-e-motion, the first purely electrically driven version of Europe’s most successful car of all time. As early as 2013 the launch of the E-Golf will herald Volkswagen’s forthcoming electric mobility offensive.

With a cruising range of 150 kilometers the electric Golf will fully satisfy everyday demands, especially in urban regions. At the same time electric mobility guarantees true driving pleasure – at least if it’s a Volkswagen: A peak performance of 85 kilowatts (115 hp) and ample torque right from standstill guarantee electric performance.

Electric driving pleasure of a very special kind is offered by the new Bulli. Its historical model has long since become legendary; the Volkswagen Bulli embodies the feeling of freedom like no other car. The study of the new Bulli gives this legend a delightful future – thanks to its electric engine, with zero consumption and zero emissions.

Plug-in

The plug-in hybrid drive is an important component of future mobility to Volkswagen Chairman Dr. Ulrich Hackenberg. “Here we are combi-



*Electric driving pleasure times two:
the Golf e-blue-motion (left page)
and the new Bulli.*

ning the best of two worlds – an unrestricted range of action with the combustion engine and an attractive range for emission free electric mobility – at the same time.” The plug-in technology’s potential for reducing CO₂ emissions is high – without restrictions as to speed, climbing power or trailing load. This is why, according to Dr. Hackenberg, from 2013/14 important vehicles will be introduced into series production incorporating plug-in technology.

Plug-in hybrid vehicles can be charged at the plug and have an electrical range of at least 50 kilometers. Consequently, a big part of everyday mobility is possible without local emissions. Furthermore these cars can also drive using their combustion engine.

Everyday test

The Golf blue-e-motion faces everyday challenges in our first test fleet. The first vehicles in Wolfsburg went to various private persons, companies and public authorities. In the course of this year further test fleets are planned for Berlin and Hanover. Every test user receives a charging box with which he can charge his electric Golf at home. Remote activation and monitoring is made possible via a special iPhone application.

Additionally, guests of the car city in Wolfsburg can experience first-hand the future of electric mobility: Under the supervision of an instructor you can take the wheel of a Golf blue-e-motion on a ten kilometer test track.

Extremely Efficient

The XL1 by Volkswagen



Extremely economical: The XL1 consumes only 0.9 liters of fuel over a distance of 100 kilometers.

200 Golf BlueMotions (right) will be available for immediate hire in Hanover, coming this autumn. A Beetle fleet is planned to be added later.



This car explores the boundaries of possibility – proving the remarkable ingenuity of its creators: The XL1 by Volkswagen is the world’s most efficient car. With a fuel consumption of just 0.9 liters per 100 kilometers, the XL1, as a close to production prototype, sets a precipitously high record economy value. Underneath the carbon fiber hood, the engineers have combined their most crucial areas of competence: The TDI technology with electric drive, forming a plug-in hybrid, and in addition its extreme lightweight construction and superior aerodynamics. As of yet the XL1 is a close-to-production prototype but it could soon be cruising the streets as the first and only 1-liter series production car.

Saving tips created by you

Anyone interested can submit their own CO₂ saving tips via the www.mythinkblue.de webpage for the “Sprintsparathon 2011”, part of the “Think Blue.” initiative. Experts from the Nature and Biodiversity Conservation Union of Germany (NABU) and Volkswagen will evaluate the feasibility of the suggestions. Those who prove themselves to be fuel saving champions and environmental whizzes at the regional competitions and the final events, have the chance of winning the first prize – a Golf BlueMotion.

Car sharing

Volkswagen’s new car sharing concept, Quicar, delivers innovative mobility to Hanover. Initially there will be 50 handover locations for a fleet of 200 Golf BlueMotions across the whole city, and in the middle-term over 100 stations are planned for construction. The cars are reserved via the internet; the handover is, thanks to innovative systems, a matter of just seconds.

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Volkswagen Aktiengesellschaft
Konzern Kommunikation
Brieffach 1972, 38436 Wolfsburg
Phone: 05361/9-77604, Fax: 05361/9-74629

V.i.S.d.P. (Person responsible according to the German press law)

Stephan Grühsem, Leiter Konzern Kommunikation; Peter Thul, Leiter Kommunikation Marke & Produkt

Editorial staff Lena Höflich, Stefanie Huland, Kathi Preppner, Lena Wilde
Kontakt: redaktion@viavision.org

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