

these technologies through the choices you make. In other words, everyone can do efficiency.

In the early 1990s, the Republic of Belarus was one of the first post-USSR countries where national energy savings policy was developed. Appropriate basic principles were drafted in the Law «On Energy Saving» that was adopted in 1998. According to this Law, a complex of national programs was elaborated and a national energy saving monitoring and administration system was established. Over thirty years of experience have shown that energy efficiency is the most abundant, cheapest, fastest approach to use less energy that we have right now. And the technology exists now to implement efficiency at many different scales, from your own house or apartment or car to large office buildings and industrial facilities. It is still considered an emerging technology, but it offers the great possibilities and is sure to find wide application in Belarus over the course of the next some years.

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### **RECHARGING ELECTRIC CARS ON THE HIGHWAY**

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Recently, the Stanford researchers have designed a new technology that could lead to wireless charging of electric vehicles while they cruise down the highway. Their charging system uses magnetic fields to wirelessly transmit large electric currents between metal coils placed about a meter apart underneath the highway.

In fact, the wireless power transfer is based on the technology called magnetic resonance coupling. In order to operate two copper coils are tuned to resonate at the same natural frequency – it is like two wine glasses that vibrate when a specific note is sung. The coils are placed around a meter apart. One coil is connected to an electric current, which generates a magnetic field that causes the second coil to resonate. In 2007, the researchers at the Massachusetts Institute of Technology (MIT) used magnetic resonance to light a 60 W bulb. The experiment demonstrated that power could be transferred between two stationary coils about 1.8 meters apart, even when humans and other obstacles are placed in between. The MIT researchers have created a spinoff company that's

developing a stationary charging system capable of wirelessly transferring about 3 kilowatts of electric power to a vehicle parked in a garage or on the street. Here's how the system would work. A series of coils connected to an electric current would be embedded in the highway. Receiving coils attached to the bottom of the car would resonate as the vehicle speeds along, creating magnetic fields that continuously transfer electricity to charge the battery. To determine the most efficient way to transmit 10 kilowatts of power to a real car, the Stanford team created computer models of systems with metal plates added to the basic coil design. However, during this experiment it was found that metallic elements in the body of the car can drastically disturb electromagnetic fields. Despite some disadvantages of this system, the researchers recently have filed a patent application for their wireless system. The next step is to test it in the laboratory and eventually try it out in real driving conditions. The researchers also want to make sure that the system won't affect drivers, passengers or the dozens of microcomputers and other vehicle operations. Although a power transfer efficiency of 97% is extremely high, it is essential that the remaining 3% is lost as heat and not as potentially harmful radiation. To be true to life, it is to be said that nowadays the system cannot become widespread because of the need of huge cash expenses.

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**THE DISCREPANCY BETWEEN  
TWO LINGUISTIC CONCEPTS 'ACCENT' AND 'DIALECT'**

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This research is related to such units of the language as accentology and dialectology. The choice of the research theme is connected with the growing interest in the issue of discrepancy between two important linguistic terms '**dialect**' and '**accent**'.

At present the problem of linguistic features identification of the above mentioned concepts in the English spontaneous speech is particularly up-to date and makes the aim of our research.

The problem solving required clarification of the differences between the terms of accents and dialects, which are regarded as distinctive fea-