успеть в создании чего-то стоящего, если не сможете вдохновить других людей последовать за вашей идеей».

Великий управленец — это тот, кто, делает верный выбор из множества альтернативных вариантов, от которого зависят пути развития человечества. Таким очень редким умением обладает Стив Джобс, и именно оно сделало его Стивом Джобсом, ставшим легендой компьютерной революции — самой значительной инновации нашего времени.

УДК 600-062

## **ENERGY EFFICIENCY**

Королев А.В. (ЭФ), Богданова Л.И. Белорусский национальный технический университет Минск, Беларусь

Efficient energy, sometimes simply called energy efficiency, use is the goal of efforts to reduce the amount of energy required to provide products and services.

The best way to understand this idea is through an example. When you replace an appliance, such as a refrigerator or clothes washer, or office equipment, such as a computer or printer, with a more energy-efficient model, the new equipment provides the same service, but uses less energy. This saves you money on your energy bill, and reduces the amount of greenhouse gases going into the atmosphere. The term energy efficiency should not be taken for energy conservation. Energy conservation is reducing or going without a service to save energy. When you turn off a light it is energy conservation. Replacing an incandescent lamp with a compact fluorescent lamp is energy efficiency. Thus, both efficiency and conservation can reduce greenhouse gas emissions.

There is no such thing as the profession of energy efficiency in fact, many professions participate in making the world more efficient. Mechanical and chemical engineers, mathematicians, computer scientists, all can work to make the products and processes of modern civilization more efficient. Policymakers can develop policies to encourage the adoption of efficient technologies in the marketplace. Children can learn about energy efficiency and encourage their parents to do the same. And you, as a community member, citizen, and consumer, can adopt and use

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.

УДК 600-062

## RECHARGING ELECTRIC CARS ON THE HIGHWAY

Вишневский С.О. (ЭФ), Богданова Л.И. Белорусский национальный технический университет Минск, Беларусь

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