

MORE EFFICIENT USE OF ENERGY CREATES NEW OPPORTUNITIES

Electric cars, heat pumps, cooling, and new lighting technologies. Services and advice on using energy more efficiently. Vattenfall is becoming actively involved in a variety of areas in an effort to reduce total energy consumption.

Electricity is an effective conveyor of energy, and by switching to electricity, total energy use can be reduced. Vattenfall has taken an active involvement in a number of areas regarding the applications for electricity.

Electric cars for reduced CO₂ emissions

Motor vehicles are one example, where a shift in favour of electricity is reducing the use of fossil fuels as well as total energy consumption, since electric motors are more efficient than combustion engines. A changeover to electric cars would result in a dramatic reduction in CO₂ emissions from the transport sector.

The limitations of electric cars today are in battery technology, which is still in its infancy. However, dramatic progress has been made in this technology through the growth of mobile telephones and their dependence on batteries. This is an emerging, major application area that the motor vehicle industry will build further upon through continued battery development.

Vattenfall has been collaborating with Volvo for a number of years on the development of plug-in hybrid cars. And in late 2008 Vattenfall began co-operating with BMW on a project focusing on electric cars in Berlin.

Strong growth in heat pumps

Various types of heat pumps are another good example of efficient use of electricity. The use of heat pumps is a major and important shift towards renewable energy. It is also an area in which Sweden is at the forefront. Although the conditions are not the same in every country, the potential is nevertheless great. Vattenfall will be working to spread this technology, which can also be used for cooling, and will be actively promoting the exchange of knowledge in the countries in which it is active.

Lighting and intelligent meters

Lighting is an area in which technological development can contribute to more efficient energy use and greater user comfort. Vattenfall offers solutions for street and outdoor lighting that lower energy use, improve lighting comfort and contribute to lower maintenance costs.

Vattenfall is also working with “intelligent” electricity meters that are read remotely. In Sweden and Finland, 1.35 million intelligent meters have already been installed for customers in the electricity network. With these meters in place, Vattenfall can offer customers new services that also promote more efficient use of energy. In time, intelligent



In November 2008, German carmaker BMW and Vattenfall joined together in a project to test 50 electric cars in Berlin. Vattenfall will provide the charging stations used by cars in the project.

meters will be installed in all countries in which Vattenfall has electricity network operations.

Energy efficiency improvements important

Vattenfall is upgrading and continuously increasing the efficiency of its own plants, and is replacing older ones with modern and more energy-efficient facilities. Vattenfall helps corporate customers with custom-tailored energy and process efficiency improvements. Some 25 major Nordic corporate customers, including Holmen, Höganäs and Korsnäs, have hired Vattenfall to analyse their energy use and help them improve the efficiency of energy use in their manufacturing processes.

In Germany, Vattenfall is working together with the City of Berlin to improve energy efficiency in public buildings. Vattenfall also has a long-standing co-operation with several hospitals in Berlin to help them reduce their energy consumption.

Vattenfall has long provided advice to households on how they can use energy more efficiently. In Sweden and Finland, Vattenfall offers online energy guides to help consumers calculate their energy use. In 2008, an interactive online guide called “Use energy wisely” was launched, providing individual energy advice and general tips on the use of energy in the home.

In Germany, too, Vattenfall has an online energy savings guide where retail customers can obtain information on how to reduce their energy use via a schematic “energy house”. In Poland, during the year Vattenfall started an energy efficiency-improvement programme directed at the general public. This campaign, which is based on an online energy savings guide, provides energy advice and offers to buy low-energy light bulbs at a discounted price. And in co-operation with the university in Silesia, Vattenfall offers industrial customers an energy efficiency improvement service.