

**Grażyna Jastrzębska, *Renewable Energy Sources and environment-friendly vehicles*, Wydawnictwo Naukowo-Techniczne, Warsaw 2007, 240 p.**



The reviewed book generally covers all major issues related to renewable energy, whose share in the Polish energy market should take one year to grow rapidly. The author Grażyna Jastrzębska is a well-known expert in the field of photovoltaic conversion and environmentally friendly vehicles. It is this section on the use of renewable energy sources in communication which makes the item stand out in the publishing market.

In terms of content the publication is extremely broad. In the first chapter the author discusses the issues related to energy and the environment. Then she describes wind energy conversion processes, wind power in Poland, and its advantages and disadvantages. The third chapter presents the equations describing the energy of water and discusses the large power plants, small hydropower and other sources of water power. She also describes here hydropower in Poland and its advantages and disadvantages. The fourth chapter presents the possibility of energy conversion of biomass and biofuels discussed in Poland, as well as their advantages and disadvantages. Then the author distinguishes geothermal resources and describes the processes of conversion of geothermal energy into electricity. She also characterizes the geothermal energy in Poland, and its advantages and disadvantages. In the sixth chapter the equations describing the energy of the sun are presented and methods of solar energy conversion are discussed. There is also a description of the solar energy in Poland and its advantages and disadvantages. In the seventh chapter the conversion of solar energy into mechanical energy is

discussed. Then the types of fuel cells, their characteristics and the latest solutions are presented. The author describes herein the use of fuel cells, their use in Poland and the advantages and disadvantages. In the ninth chapter the methods of hydrogen production, its properties, storage, use and advantages and disadvantages are discussed. Later in the book the author presents the development of the automotive industry and its consequences. In the eleventh chapter she describes electric vehicles with battery electrochemical fuel cell and methods of their powering. She also discusses the prototypes of electric cars, conducted experiments and cars currently produced and presents the possibility of using fuel cells in urban transport. In the twelfth chapter she describes the use of the sun, infrared and wind powers in vehicles. Then she describes design solutions for electromechanical hybrid cars and diesel-electric, discusses their principle of operation and provides examples. She also addresses the hybrid buses and “trubrydy”. In the fourteenth chapter she describes wheelers electric vehicles. Then there is a discussion of the storage of energy in environmentally friendly vehicles.

In my opinion the book “Renewable energy sources and environmentally friendly vehicles” includes such a large amount of knowledge that both students of environmental protection, ecology, transport, energy, electrical vehicles, electric drives, as well as ecologists and engineers professionally engaged in renewable energy, road and hybrid electric vehicles, and environmental protection will find something for themselves. An additional advantage of this position is simple and accessible language and the extensive graphic layout.

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