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Nota di contenuto	1. Nuclear power: waste or fuel? / Raymond Wisenburg -- 1.1 Introduction -- 1.2 Nuclear waste -- 1.3 Nuclear fuel reprocessing -- 1.4 Nuclear fuel disposal -- 1.5 Conclusion -- References -- 2. Small hydroelectric plants / Chad Kaleky -- 2.1 Introduction to hydropower -- 2.2 Diversity of hydropower plant design -- 2.3 Small hydroelectric power plants in use -- 2.4 Design of small hydroelectric power plants -- 2.5 Automatic controls in small hydroelectric plants -- 2.6 Environmental impact -- 2.7 Small hydropower utilization -- 2.8 Generators in hydropower systems -- 2.9 Electricity production using current water supply system -- 2.10 Conclusion -- References -- 3. Small wind turbine applications and market analysis / Tyler Lovelle -- 3.1 Introduction -- 3.2 Discussion -- 3.3 Conclusion -- References -- 4. Organic photovoltaics / Nick Evangelista -- 4.1 Introduction -- 4.2 Status and perspectives -- 4.3 Discussion and conclusion -- References -- 5. Increasing diversity of renewable energy through tidal water power / Benton Patterson -- 5.1 Introduction -- 5.2 Types of tidal water power

Sommario/riassunto

A collection of essays by the same number of engineers. They show a variety of viewpoints and diversity. This collection is meant to incite and excite conversation among engineers, scientists, and society at large. It would serve as a catalyst for a three-credit course as an introductory engineering subject to non engineering university students. As university education develops to better prepare future leaders to appreciate science, technology, engineering, and mathematics, engineering courses for non engineering majors are essential and so is the requirement of worthy textbooks. This monograph intends to be one of the useful tools available. The wide range of topics includes nuclear power, small hydroelectric plants, wind turbines, and organic photovoltaics. Nanotechnology, natural gas, and deep sea oil drilling have also been presented. Energy efficiency has been called the "fifth fuel" and these topics have been covered. The four hydrocarbon fuels are oil, coal, natural gas, and biofuel.