



## METADATA

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### Abstract

Energy, as a fundamental resource of great importance for the profitability of a company or for the development of an economy, needs sound management in order to deliver what is anticipated. Furthermore, natural resources are being evaluated by humans and their value is being assessed according to their function or the activity they contribute to. In this context, after the economic dimension of ecological systems is presented, the relationship between environment and economic development is then explained by describing the balance between economy and environment, the relationship between economic prosperity and environmental quality, the competitive and monopolistic markets, the effects on economy and trade by the response measures to environmental problems and the correlation between population, economy and environment. Next, the economics and management of natural resources are being analyzed, the economics of recycling (economic implications from the depletion of natural resources,

economics of recycling and solid waste management, economic analysis of recycling programs - case studies) and the economics of environmental standards and environmental incentives. The analysis then focuses on energy and energy resources where the basic concepts and units of energy are provided, the forms of energy are presented, the laws of thermodynamics are analyzed and the electrical and nuclear energy as well as the renewable forms of energy (hydrodynamic energy, wind energy, solar energy, geothermal energy, biomass etc.) are described. Afterwards, a detailed reference to the theoretical framework of energy management is made, where the basic principles of energy management are described and concepts such as the rational use of energy, energy auditing, energy security and energy development strategy are introduced. Finally, the current greek and international energy situation is presented, both in terms of energy consumption and production as well as in terms of energy reserves.

