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Sommario/riassunto	This book aims to perform an impartial analysis to evaluate the implications of the environmental costs and impacts of a wide range of technologies and energy strategies. This information is intended to be used to support decision-making by groups, including researchers, industry, regulators, and policy-makers. Life cycle assessment (LCA) and technoeconomic analysis can be applied to a wide variety of technologies and energy strategies, both established and emerging. LCA is a method used to evaluate the possible environmental impacts of a product, material, process, or activity. It assesses the environmental impact throughout the life cycle of a system, from the acquisition of materials to the manufacture, use, and final disposal of a product. Technoeconomic analysis refers to cost evaluations, including production cost and life cycle cost. Often, in order to carry out technoeconomic analysis, researchers are required to obtain data on the performance of new technologies that operate on a very small scale in order to subsequently design configurations on a commercial scale and estimate the costs of such expansions. The results of the developed models help identify possible market applications and provide an estimate of long-term impacts. These methods, together with other forms of decision analysis, are very useful in the development and improvement of energy objectives, since they will serve to compare different decisions, evaluating their political and economic feasibility and providing guidance on potential financial and

technological risks.