Record Nr. UNINA9910784414603321 Autore Deutch John M. <1938-> **Titolo** Making technology work: applications in energy and the environment / / John Deutch, Richard K. Lester [[electronic resource]] Cambridge:,: Cambridge University Press,, 2004 Pubbl/distr/stampa **ISBN** 1-107-14513-9 1-280-43737-5 9786610437375 0-511-18426-3 0-511-16593-5 0-511-16398-3 0-511-61635-X 0-511-31283-0 0-511-16478-5 Descrizione fisica 1 online resource (x, 272 pages) : digital, PDF file(s) Disciplina 621.042 Soggetti Power resources **Environmental protection** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Title from publisher's bibliographic system (viewed on 05 Oct 2015). Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Introduction -- Gasohol -- Solar thermal, windpower, and photovoltaic technologies -- Electricity from coal -- Controlling acid rain from coalfired power plants -- Greenhouse gases and global warming -- Nuclear power and its fuel cycle -- Managing nuclear waste -- Nuclear power and weapons proliferation -- Natural gas -- Safety and risk: examples from the liquefied natural gas and nuclear industries -- Synthetic fuels -- Fuel cells for automobiles -- Energy models and statistics -- The government's role in innovation -- Conclusions. This book presents fifteen cases of technology applications in the Sommario/riassunto energy and environment sectors, including solar, wind, fuel cell,

nuclear, coal combustion and emission control technologies. The case studies demonstrate the importance of an interdisciplinary approach, integrating technical and non-technical aspects of the problem. They

also introduce a toolbox of analytical techniques useful in the context of realistic technology application. These techniques include energy and mass balances, project financial analysis tools, treatment of external costs and benefits, probabilistic risk assessment, learning curves, regression analysis, and life cycle costing. Each case study presents a description of the relevant technology at a level accessible to anyone familiar with elementary concepts in basic science and engineering. The book is addressed to upper-level undergraduate students in the natural sciences, engineering and the social sciences who are interested in learning about problems of technology application, as well as technology practitioners in industry and government.