1. Record Nr. UNINA9910453882903321

Autore	Pielou E. C. <1924->
Titolo	The energy of nature [[electronic resource] /] / E.C. Pielou
Pubbl/distr/stampa	Chicago, : University of Chicago Press, 2001
ISBN	1-281-96620-7 9786611966201 0-226-66805-3
Descrizione fisica	1 online resource (259 p.)
Disciplina	530
Soggetti	Force and energy Physics Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Frontmatter -- Contents -- Preface -- Some Notes on Scientific Notation -- 1.Energy Is Everywhere -- 2. What Is Energy? Some Preliminary Physics -- 3. Energy and Its Ultimate Fate -- 4. Solar Energy and the Upper Atmosphere -- 5. Energy in the Lower Atmosphere: The Weather Near the Ground -- 6. The Sun, the Wind, and the Sea -- 7. The Energy of Ocean Waves -- 8. The Energy of the Tides -- 9. How Surface Energy Shapes the Land -- 10. Chemical Energy -- 11. Energy Enters the Biosphere -- 12. Further Travels of Energy in the Biosphere -- 13. The Warmth of the Earth: Nuclear Reactions Sustain All Life -- 14. The Earth's Internal Energy -- 15. How the Earth Sheds Its Warmth -- 16. Electromagnetic Energy -- 17. Wave Energy: Sound Waves and Seismic Waves -- 18. Wave Energy: Electomagnetic Waves -- 19. How Energy Is Used -- Epilogue -- Notes -- Index
Sommario/riassunto	Energy is crucial for events of every kind, in this world or any other. Without energy, nothing would ever happen. Nothing would move and there would be no life. The sun wouldn't shine, winds wouldn't blow, rivers wouldn't flow, trees wouldn't grow, birds wouldn't fly, and fish wouldn't swim; indeed no material object, living or dead, could even exist. In spite of all this, energy is seldom considered a part of what we call "nature." In The Energy of Nature, E. C. Pielou explores energy's

role in nature-how and where it originates, what it does, and what becomes of it. Drawing on a wide range of scientific disciplines, from physics, chemistry, and biology to all the earth sciences, as well as on her own lifelong experience as a naturalist, Pielou opens our eyes to the myriad ways energy and its transfer affect the earth and its inhabitants. Along the way we learn how energy is delivered to the earth from the sun; how it causes weather, winds, and tides; how it shapes the earth through mountain building and erosion; how it is captured and used by living things; how it is stored in chemical bonds; how nuclear energy is released; how it heats the unseen depths of the planet and is explosively revealed in the turmoil of earthquakes and volcanoes; how energy manifests itself in magnetism and electromagnetic waves; how we harness it to fuel human societies; and much more. Filled with fascinating information and helpful illustrations (hand drawn by the author), The Energy of Nature is fun, readable, and instructive. Science buffs of all ages will be delighted. "A luminous, inquiring, and thoughtful exploration of Earth's energetics."-Jocylyn McDowell, Discovery