1. Record Nr. UNINA9910493154703321 Autore Perkins John H. Titolo Changing Energy: The Transition to a Sustainable Future // John H. **Perkins** Pubbl/distr/stampa Berkeley, CA:,: University of California Press,, [2017] ©2017 **ISBN** 0-520-96284-2 Descrizione fisica 1 online resource (365 pages) Disciplina 333.79/4 Soggetti **Energy consumption** Renewable energy sources Fossil fuels Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front matter -- Contents -- Preface -- Prologue -- 1. The Invisible Keystone of the Modern World -- 2. Energy and Energy Services -- 3. Energy and the Modern Nation-State -- 4. Primary Fuels and Energy Efficiency -- 5. Energy Systems -- 6. Climate Change -- 7. Geopolitical Tensions, Health and Environmental Effects, and Depletion -- 8. The Fourth Energy Transition: Energy Efficiency and Renewable Energy -- 9. Energy Sources: Criteria for Acceptability -- 10. Strengths and Weaknesses of Primary Energy Sources -- 11. Barriers and Challenges -- Epilogue -- Appendix 1. Units for Measuring Energy and Power --Appendix 2. Production of Heat by Combustion and Fission -- Notes --

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Changing Energy outlines how humanity established the current energy economy through three previous transitions, and how we now stand poised for a necessary fourth transition. Human societies around the globe have received immense benefits from uses of coal, oil, gas, and uranium sources, yet we must now rebuild our energy economies to rely on renewable sources and use them efficiently. The imperative for a fourth energy transition comes from dangers related to climate change, geopolitical tensions, documented health and environmental

effects, and long-term depletion of today's sources. John H. Perkins argues that a future in which current levels of energy service benefits are sustained can come only from investments in the technologies needed to bring about a fourth energy transition. Changing Energy envisions a viable post-fossil fuel economy and identifies the barriers to be overcome.