1. Record Nr. UNINA9910254114403321

Autore	Heinberg Richard
Titolo	Our Renewable Future : Laying the Path for One Hundred Percent Clean Energy / / by Richard Heinberg, David Fridley
Pubbl/distr/stampa	Washington, DC : , : Island Press/Center for Resource Economics : , : Imprint : Island Press, , 2016
ISBN	9781610917803 1610917804
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (Approx. 250 p.)
Disciplina	338.927
Soggetti	Sustainability Renewable energy sources Climatology Renewable Energy Climate Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- PART I. The Context: It's All About Energy -- 1. Energy 101 -- 2. A Quick Look At Our Current Energy System -- PART II. Energy Supply in a Renewable World: Opportunities and Challenges -- 3. Renewable Electricity: Falling Costs, Variability, and Scaling Challenges -- 4. Transportation: The Substitution Challenge -- 5. Other Uses of Fossil Fuels: the Substitution Challenge Continues -- 6. Energy Supply: How Much Will We Have? How Much Will We Need?- 7. What About…?- PART III. Preparing For Our Renewable Future.-8. Energy and Justice -- 9. What Government Can Do -- 10. What We the People Can Do -- 11. What We Learned.
Sommario/riassunto	The next few decades will see a profound energy transformation throughout the world. By the end of the century (and perhaps sooner), we will shift from fossil fuel dependence to rely primarily on renewable sources like solar, wind, biomass, and geothermal power. Driven by the need to avert catastrophic climate change and by the depletion of easily accessible oil, coal, and natural gas, this transformation will entail a major shift in how we live. What might a 100% renewable future look

like? Which technologies will play a crucial role in our energy future? What challenges will we face in this transition? And how can we make sure our new system is just and equitable? This volume explores the challenges and opportunities presented by the shift to renewable energy. Beginning with a comprehensive overview of our current energy system, the authors survey issues of energy supply and demand in key sectors of the economy, including electricity generation, transportation, buildings, andmanufacturing. In their detailed review of each sector, the authors examine the most crucial challenges we face, from intermittency in fuel sources to energy storage and grid redesign. The book concludes with a discussion of energy and equity and a summary of key lessons and steps forward at the individual, community, and national level. The transition to clean energy will not be a simple matter of replacing coal with wind power or oil with solar; it will require us to adapt our energy usage as dramatically as we adapt our energy sources. This book is a clear-eyed and urgent guide to this transformation that will be a crucial resource for policymakers and energy activists.