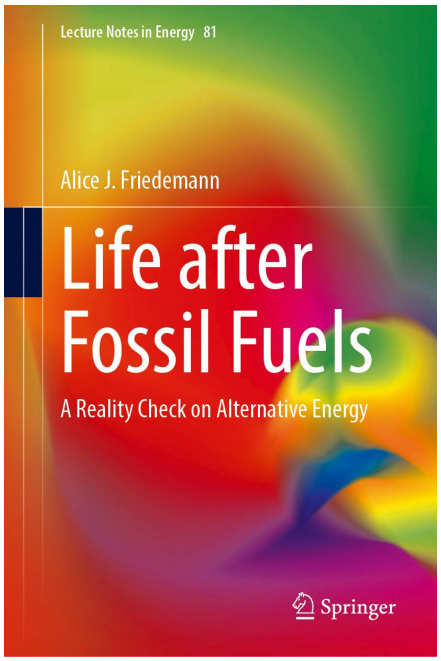

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Energy : Renewable and Green Energy

Friedemann, Alice J.

Life after Fossil Fuels

A Reality Check on Alternative Energy

- Surveys the inventory of energy alternatives, examining whether they can replace or supplement fossil fuels
- Provides up to date research on the overlooked role of fossil fuels in industry and the challenges to the decarbonization of manufacturing
- Features an overview of the myriad roles fossil energy plays in society beyond electricity generation
- Includes a detailed look at the ways we could try to grow more crops to increase biofuels
- Emphasizes that there is limited time left to find alternative energy resources to replace fossils before they begin to decline

This book is a reality check of where energy will come from in the future. Today, our economy is utterly dependent on fossil fuels. They are essential to transportation, manufacturing, farming, electricity, and to make fertilizers, cement, steel, roads, cars, and half a million other products. One day, sooner or later, fossil fuels will no longer be abundant and affordable. Inevitably, one day, global oil production will decline. That time may be nearer than we realize. Some experts predict oil shortages as soon as 2022 to 2030. What then are our options for replacing the fossil fuels that turn the great wheel of civilization? Surveying the arsenal of alternatives – wind, solar, hydrogen, geothermal, nuclear, batteries, catenary systems, fusion, methane hydrates, power2gas, wave, tidal power and biomass – this book examines whether they can replace or supplement fossil fuels. The book also looks at substitute energy sources from the standpoint of the energy users. Manufacturing, which uses half of fossil fuels, often requires very high heat, which in many cases electricity can't provide. Industry uses fossil fuels as a feedstock for countless products, and must find substitutes. And, as detailed in the author's previous book, "When Trucks Stop Running: Energy and the Future of Transportation," ships, locomotives, and heavy-duty trucks are fueled by diesel. What can replace diesel? Taking off the rose-colored glasses, author Alice Friedemann analyzes our options.

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