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Nota di contenuto	Title Page; Copyright Page; Contents; Preface; Foreword; Chapter 1 Impacts of Energy and Electricity on Society; 1.1 What Are "Social and Environmental Impacts"?; 1.1.1 Interactions and Effects of Technology on Society and the Environment; 1.1.2 Sustainable Development; 1.1.3 Wind Power, Technology, and Society; 1.2 Early Wind Power Innovation and Discovery; 1.2.1 Age of Sail Power; 1.2.2 Wind Power and the Transcontinental Railroad; 1.2.3 Wind Power for Settling the Great Plains; 1.2.4 The Dutch Experience; 1.2.5 The English Experience; 1.2.6 Wind Power for Industry 1.3 Impact of Electricity on Society 1.3.1 National Academy of Engineering: Great Achievements of the Twentieth Century; 1.3.2 History of the Early Electric Utilities; 1.3.3 Rural Electrification Administration; 1.3.4 Expansion of the Electric Grid; 1.3.5 Electricity-World View; 1.4 History of Wind Energy for Electricity Production; 1.5 Renewables and Electrification in Third World Countries; 1.6 The Nexus of Wind, Water, and Electricity; References; Chapter 2 The Basics of Electricity; 2.1 Units of Electrical Measurement; 2.2 Descriptions of Common Electrical Equipment 2.3 Types of Companies or Business Units within the Electric Industry 2.4 Frequently Asked Questions; 2.4.1 How Do I Tell How Much

Electricity I Use and How Much It Costs?; 2.4.2 Can Wind Energy or Electricity Be Stored Until It Is Needed?; 2.4.3 How Much Does It Cost Me to Run the Air Conditioner or Other Appliances in My Home?; 2.4.4 If We Do Not Store Electricity from Wind Energy, What Happens When the Wind Stops?; 2.4.5 How Can Wind Energy Get to My House? 2.4.6 If I Am Buying Renewable Energy from My Electricity Provider, How Do I Know That the Electricity I Use Came from a Source of Renewable Energy? 2.4.7 My Utility Charges More for "Green Energy." Does Wind Power Cost More than Electricity from Traditional Sources?; 2.4.8 Can I Install a Small Wind Turbine at My House or Business and Reduce My Electric Bill?; Reference; Chapter 3 Overview of Wind Energy and Other Sources of Electricity; 3.1 Defining Renewable Energy; 3.2 Sources and Uses of Energy; 3.3 Growth of Renewable Energy in the United States 3.4 Use of Renewable Energy for Electricity Production in the United States 3.5 Growth of Wind Power Capacity in the United States; 3.6 Subsidies or Incentives for Wind Energy; 3.7 Potential for Increased Use of Wind Energy in the United States; 3.8 Wind Resources in the United States; 3.9 Overview of Other Sources of Electric Generation in the United States; 3.9.1 Coal; 3.9.2 Nuclear Energy; 3.9.3 Natural Gas; References; Chapter 4 Conversion of Power in the Wind to Electricity; 4.1 Wind Power Plants and Wind Turbines; 4.1.1 How a Wind Turbine Works; 4.1.2 Wind Turbine Anatomy 4.1.3 The Power Curve

Sommario/riassunto

Examines the possible societal impacts of wind energy projects and explains the potential issues faced when siting, constructing, and operating a wind energy project. This book begins with a history of wind power and the social impacts of both electricity and wind power from a historical perspective, a discussion of basic electrical terms, and a primer on the conversion of power in the wind to electricity. Much of the second half of the book is devoted to comparing wind energy to other forms of electric generation, both renewable and non-renewable sources. In order to have a true understand
