1. Record Nr. UNINA9910462794303321 Autore Fanchi John R **Titolo** Energy in the 21st century [[electronic resource] /] / John R. Fanchi with Christopher J. Fanchi Singapore, : World Scientific, 2013 Pubbl/distr/stampa **ISBN** 981-4434-68-X Edizione [3rd ed.] Descrizione fisica 1 online resource (416 p.) Altri autori (Persone) FanchiChristopher J Disciplina 621.042 Soggetti Renewable energy sources Renewable energy 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 Preface to the Third Edition; Dedication; About the Authors; CONTENTS; 1 A Brief History of Energy Consumption Learning Objectives; 1.1 What is Energy?; 1.2 Historical Energy Consumption; 1.3 Energy Consumption and the Quality of Life; 1.4 Energy in Transition; 1.5 ""Decarbonization""; 1.6 Activities; 2 Fossil Energy - Coal Learning Objectives; 2.1 Geologic History of the Earth; 2.2 Origin of Coal; 2.3 Coal; 2.4 Distribution and Production of Coal; 2.4.1 Coal Distribution; 2.4.2 Coal Production; 2.5 Fossil Energy and Combustion; 2.6 Case Study: A Coal-Fired Power Plant; 2.7 Coal Gas 2.7.1 Global Distribution of Coal Gas2.8 Activities; 3 Fossil Energy - Oil and Gas Learning Objectives; 3.1 Geology of Oil and Gas Reservoirs; 3.1.1 Rock Attributes; 3.1.2 Depositional Environment; 3.2 Origin of Oil and Gas; 3.2.1 Biogenic Theory; 3.2.2 Abiogenic Theory; 3.3 Oil and Gas Reservoirs and Reserves; 3.3.1 Resource Pyramid; 3.3.2 Reserves; 3.4 Classification of Oil and Gas; 3.5 Shale Oil, Tar Sands and Extra Heavy Oil; 3.6 Unconventional Gas; 3.6.1 Gas Hydrates; 3.6.2 Tight Gas Sands and Shale Gas; 3.7 Global Distribution of Oil and Gas; 3.8 Activities 4 Peak Oil Learning Objectives 4.1 Oil and Gas Production; 4.1.1 History of Drilling Methods; 4.1.2 Modern Drilling Methods; 4.1.3 Hydraulic

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Sommario/riassunto

Many events that affect global energy production and consumption have occurred since the second edition of Energy in the 21st Century appeared in 2011. For example, an earthquake and tsunami in Japan led to the disruption of the Fukushima nuclear facility and a global reexamination of the safety of the nuclear industry. Oil and natural gas prices continue to be volatile, and the demand for energy has been affected by the global economy. The third edition updates data and the discussion of recent events. Energy in the 21st Century has been used as the text for an introductory energy course for