

1. Record Nr.	UNINA9910783463003321
Autore	Miller Bruce G., M.S.
Titolo	Coal energy systems [[electronic resource] /] / Bruce G. Miller
Pubbl/distr/stampa	Amsterdam ; ; London, : Elsevier Academic Press, c2005
ISBN	1-4933-0159-4 1-281-00827-3 0-08-047660-0 9786611008277
Descrizione fisica	1 online resource (550 p.)
Collana	Sustainable world series
Disciplina	662.62
Soggetti	Coal Coal-fired power plants Coal-fired furnaces
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	Cover image; Title page; Table of Contents; Preface; Chapter 1: Introduction to Coal; Publisher Summary; What Is Coal?; Origin of Coal; Coalification; Classification of Coal; Coal Distribution and Resources; Chapter 2: Past, Present, and Future Role of Coal; Publisher Summary; The Use of Coal in the Pre-Industrial Revolution Era; The Use of Coal during the Industrial Revolution; Post-Industrial Revolution Use of Coal; Overview of Energy in the United States; Coal Production in the United States; Coal Consumption in the United States; U.S. Coal Exports and Imports World Primary Energy Production and Consumption Future Projections of Energy Use and Coal's Contribution to the Energy Mix; Role of Coal in the United States' 2001 Energy Policy; Chapter 3: The Effect of Coal Usage on Human Health and the Environment; Publisher Summary; Coal Mining; Coal Preparation; Coal Transportation; Coal Combustion By-Products (CCB); Emissions from Coal Combustion; Chapter 4: Coal-Fired Emissions and Legislative Action in the United States; Publisher Summary; Major Coal-Related Health Episodes; History of Legislative Action for Coal-Fired Power Plants Emissions Legislation in other Countries Air Quality and Coal-Fired

Emissions; Chapter 5: Technologies for Coal Utilization; Publisher Summary; Coal Combustion; Carbonization; Gasification; Liquefaction; Chapter 6: Emissions Control Strategies for Power Plants; Publisher Summary; Currently Regulated Emissions; Pollutants with Pending Compliance Regulation; Potential Future Regulated Emissions; Multipollutant Control; Chapter 7: Future Power Generation (Near-Zero Emissions During Electricity Generation); Publisher Summary; Clean Coal Technology Demonstration Program
Power Plant Improvement Initiative (PPII)Clean Coal Power Initiative (CCPI); Vision 21; FutureGen; Benefits of the DOE's Clean Coal Power Program/Demonstrations; Chapter 8: Coal's Role in Providing United States Energy Security; Publisher Summary; Overview of U.S. Energy Security Issues; National Energy Plan and Coal Utilization; Energy and the Economy; Natural Gas Use in Power Generation; The Potential of Coal to Reduce U.S. Dependency on Imported Crude Oil; The Resurgence of Coal in Electric Power Generation; Production of Hydrogen from Coal
The Role of Coal in Providing Security to the U.S. Food SupplyCoal's Role in International Energy Security and Sustainable Development; Concluding Statements; APPENDIX A: Coal-Fired Emission Factors; APPENDIX B: Original List of Hazardous Air Pollutants; APPENDIX C: Initial 263 Units Identified in Phase I (SO₂) of the Acid Rain Program; APPENDIX D: Commercial Gasification Facilities Worldwide; Index

Sommario/riassunto

Coal is currently a major energy source in the United States as well as throughout the world, especially among many developing countries, and will continue to be so for many years. Fossil fuels will continue to be the dominant energy source for fueling the United States economy, with coal playing a major role for decades.

Coal provides stability in price and availability, will continue to be a major source of electricity generation, will be the major source of hydrogen for the coming hydrogen economy, and has the potential to become an important source of liquid fuels. Conservation and
