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7DYUTO - TRISTIAN VICTORIA

How capitalism first promoted fossil fuels with the rise of steam power The more we know about the catastrophic implications of climate change, the more fossil fuels we burn. How did we end up in this mess? In this masterful new history, Andreas Malm claims it all began in Britain with the rise of steam power. But why did manufacturers turn from traditional sources of power, notably water mills, to an engine fired by coal? Contrary to established views, steam offered neither cheaper nor more abundant energy—but rather superior control of subordinate labour. Animated by fossil fuels, capital could concentrate production at the most profitable sites and during the most convenient hours, as it continues to do today. Sweeping from nineteenth-century Manchester to the emissions explosion in China, from the original triumph of coal to the stalled shift to renewables, this study hones in on the burning heart of capital and demonstrates, in unprecedented depth, that turning down the heat will mean a radical overthrow of the current economic order.

"Engrossing . . . Coal, to borrow a phrase, is king." -- New York Times Book Review In this remarkable book, Barbara Freese takes us on a rich historical journey that begins hundreds of millions of years ago and spans the globe. Prized as "the best stone in Britain" by Roman invaders who carved jewelry out of it, coal has transformed societies, launched empires, and expanded frontiers. It made China an eleventh-century superpower, inspired the Communist Manifesto, and helped the North win the American Civil War. Yet coal's transformative power has come at tremendous cost, from the blackening of our lungs and skies, to the perils of mining, to global warming. Now updated with a new chapter describing the high-stakes conflict between coal's defenders and those working to preserve a livable climate, Coal offers a captivating history of the mineral that helped build the modern world but now endangers our future.

A "meticulously researched" (The New York Times Book Review) examination of energy transitions over time and an exploration of the current challenges presented by global warming, a surging world population, and renewable energy—from Pulitzer Prize- and National Book Award-winning author Richard Rhodes. People have lived and died, businesses have prospered and failed, and nations have risen to world power and declined, all over energy challenges. Through an unforgettable cast of characters, Pulitzer Prize-winning author Richard Rhodes explains how wood gave way to coal and coal made room for oil, as we now turn to natural gas, nuclear power, and renewable energy. "Entertaining and informative...a powerful look at the importance of science" (NPR.org), Rhodes looks back on five centuries of progress, through such influential figures as Queen Elizabeth I, King James I, Benjamin Franklin, Herman Melville, John D. Rockefeller, and Henry Ford. In his "magisterial history...a tour de force of popular science" (Kirkus Reviews, starred review), Rhodes shows how breakthroughs in energy production occurred; from animal and waterpower to the steam engine, from internal-combustion to the electric motor. He looks at the current energy landscape, with a focus on how wind energy is competing for dominance with cast supplies of coal and natural gas. He also addresses the specter of global warming, and a population hurtling towards ten billion by 2100. Human beings have confronted the problem of how to draw energy from raw material since the beginning of time. Each invention, each discovery, each adaptation brought further challenges, and through such transformations, we arrived at where we are today. "A beautifully written, often inspiring saga of ingenuity and progress...Energy brings facts, context, and clarity to a key, often contentious subject" (Booklist, starred review).

While concerns about climate change have focused negative attention on the coal industry in recent years, as descendants of the industrial revolution we have all benefitted from the mining of the black seam. Coal has significantly influenced the course of human history and our social and natural environments. This book takes readers on a journey through the extraordinary artistic responses to coal, from its role in the works of writers such as Émile Zola, D. H. Lawrence, and George Orwell; to the way it inspired the work of painters, including J. M. W. Turner, Claude Monet, and Vincent van Gogh; to the place of coal in film, song, and folklore; as well as the surprising allure of coal tourism. Strikingly illustrated, Coal provides engaging and informative insight into the myriad ways coal has affected our lives.

"The most comprehensive and comprehensible history of the West Virginia Coal War I've ever read" (John Sayles, writer and director of Matewan). On September 1, 1912, the largest, most protracted, and deadliest working class uprising in American history was waged in West Virginia. On one side were powerful corporations whose millions bought armed guards and political influence. On the other side were fifty thousand mine workers, the nation's largest labor union, and the legendary "miners' angel," Mother Jones. The fight for unionization and civil rights sparked a political crisis that verged on civil war, stretching from the creeks and hollows of the Appalachians to the US Senate. Attempts to unionize were met with stiff resistance. Fundamental rights were bent then broken, and the violence evolved from bloody skirmishes to open armed conflict, as an army of more than fifty thousand miners finally marched to an explosive showdown. Extensively researched and vividly told, this definitive book about an essential chapter in the history of American freedom, "gives this backwoods struggle between capital and labor the due it deserves. [Green] tells a dark, often despairing story from a century ago that rings true today" (Pittsburgh Post-Gazette).

The New York Times bestselling author of *The Moral Case for Fossil Fuels* draws on the latest data and new insights to challenge everything you thought you knew about the future of energy For over a decade, philosopher and energy expert Alex Epstein has predicted that any negative impacts of fossil fuel use on our climate will be outweighed by the unique benefits of fossil fuels to human flourishing—including their unrivaled ability to provide low-cost, reliable energy to billions of people around the world, especially the world's poorest people. And contrary to what we hear from media "experts" about today's "renewable revolution" and "climate emergency," reality has proven Epstein right: Fact: Fossil fuels are still the dominant source of energy around the world, and growing fast—while much-hyped renewables are causing skyrocketing electricity prices and increased black-

outs. Fact: Fossil-fueled development has brought global poverty to an all-time low. Fact: While fossil fuels have contributed to the 1 degree of warming in the last 170 years, climate-related deaths are at all-time lows thanks to fossil-fueled development. What does the future hold? In *Fossil Future*, Epstein, applying his distinctive "human flourishing framework" to the latest evidence, comes to the shocking conclusion that the benefits of fossil fuels will continue to far outweigh their side effects—including climate impacts—for generations to come. The path to global human flourishing, Epstein argues, is a combination of using more fossil fuels, getting better at "climate mastery," and establishing "energy freedom" policies that allow nuclear and other truly promising alternatives to reach their full long-term potential. Today's pervasive claims of imminent climate catastrophe and imminent renewable energy dominance, Epstein shows, are based on what he calls the "anti-impact framework"—a set of faulty methods, false assumptions, and anti-human values that have caused the media's designated experts to make wildly wrong predictions about fossil fuels, climate, and renewables for the last fifty years. Deeply researched and wide-ranging, this book will cause you to rethink everything you thought you knew about the future of our energy use, our environment, and our climate.

Concern over the effects of airborne pollution, green house gases, and the impact of global warming has become a worldwide issue that transcends international boundaries, politics, and social responsibility. The 2nd Edition of *Coal Energy Systems: Clean Coal Technology* describes a new generation of energy processes that sharply reduce air emissions and other pollutants from coal-burning power plants. Coal is the dirtiest of all fossil fuels. When burned, it produces emissions that contribute to global warming, create acid rain, and pollute water. With all of the interest and research surrounding nuclear energy, hydropower, and biofuels, many think that coal is finally on its way out. However, coal generates half of the electricity in the United States and throughout the world today. It will likely continue to do so as long as it's cheap and plentiful [Source: Energy Information Administration]. 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 renewable/sustainable energy are important in the overall energy picture, but will play a lesser role in helping us satisfy our energy demands today. Dramatically updated to meet the needs of an ever changing energy market, *Coal Energy Systems, 2nd Edition* is a single source covering policy and the engineering involved in implementing that policy. The book addresses many coal-related subjects of interest ranging from the chemistry of coal and the future engineering anatomy of a coal fired plant to the cutting edge clean coal technologies being researched and utilized today. A 50% update over the first edition, this new book contains new chapters on processes such as CO2 capture and sequestration, Integrated Gasification Combined Cycle (IGCC) systems, Pulverized-Coal Power Plants and Carbon Emission Trading. Existing materials on worldwide coal distribution and quantities, technical and policy issues regarding the use of coal, technologies used and under development for utilizing coal to produce heat, electricity, and chemicals with low environmental impact, vision for utilizing coal well into the 21st century, and the security coal presents. *Clean Liquids and Gaseous Fuels from Coal for Electric Power* Integrated Gasification Combined Cycle (IGCC) systems Pulverized-Coal Power Plants Advanced Coal-Based Power Plants Fluidized-Bed Combustion Technology CO2 capture and sequestration

This book examines how the expansion of a steam-powered Royal Navy from the second half of the nineteenth century had wider ramifications across the British Empire. In particular, it considers how steam propulsion made vessels utterly dependent on a particular resource - coal - and its distribution around the world. In doing so, it shows that the 'coal question' was central to imperial defence and the protection of trade, requiring the creation of infrastructures that spanned the globe. This infrastructure required careful management, and the processes involved show the development of bureaucracy and the reliance on the 'contractor state' to ensure this was both robust and able to allow swift mobilisation in war. The requirement to stop regularly at foreign stations also brought men of the Royal navy into contact with local coal heavers, as well as indigenous populations and landscapes. These encounters and their dissemination are crucial to our understanding of imperial relationships and imaginations at the height of the imperial age.

The Age of Empire was driven by coal, and the Middle East—as an idea—was made by coal. Coal's imperial infrastructure presaged the geopolitics of oil that wreaks carnage today, as carbonization threatens our very climate. *Powering Empire* argues that we cannot promote worldwide decarbonization without first understanding the history of the globalization of carbon energy. How did this black rock come to have such long-lasting power over the world economy? Focusing on the flow of British carbon energy to the Middle East, On Barak excavates the historic nexus between coal and empire to reveal the political and military motives behind what is conventionally seen as a technological innovation. He provocatively recounts the carbon-intensive entanglements of Western and non-Western powers and reveals unfamiliar resources—such as Islamic risk-aversion and Gandhian vegetarianism—for a climate justice that relies on more diverse and ethical solutions worldwide.

"A sprawling story richly textured with original material, quirky details and amusing anecdotes . . ." —Wall Street Journal "It is a cause for celebration that Yergin has returned with his perspective on a very different landscape . . . [I]t is impossible to think of a better introduction to the essentials of energy in the 21st century. The Quest is . . . the definitive guide to how we got here." —The Financial Times This long-awaited successor to Daniel Yergin's Pulitzer Prize-winning *The Prize* provides an essential, overarching narrative of global energy, the principal engine of geopolitical and economic change A master storyteller as well as a leading energy expert, Daniel Yergin continues the riveting story begun in his Pulitzer Prize-winning book, *The Prize*. In *The Quest*, Yergin shows us how energy is an engine of global political and economic change and conflict, in a story that spans the energies on which our civilization has been built and the new energies that are competing to replace them. *The Quest* tells the inside stories, tackles the tough questions, and reveals surprising insights about coal, electricity, and natural gas. He explains how climate change became a great issue and

leads readers through the rebirth of renewable energies, energy independence, and the return of the electric car. Epic in scope and never more timely, *The Quest* vividly reveals the decisions, technologies, and individuals that are shaping our future.

Carbon technocracy -- Vertical natures -- Technological enterprise -- Fueling anxieties -- Imperial extraction -- Nationalist reconstruction -- Socialist industrialization -- Exhausted limits.

The Silent Epidemic: Coal and the Hidden Threat to Health.

"A brilliant, revisionist argument that places oil companies at the heart of 20th century history—and of the political and environmental crises we now face." —Guardian Oil is a curse, it is often said, that condemns the countries producing it to an existence defined by war, corruption and enormous inequality. Carbon Democracy tells a more complex story, arguing that no nation escapes the political consequences of our collective dependence on oil. It shapes the body politic both in regions such as the Middle East, which rely upon revenues from oil production, and in the places that have the greatest demand for energy. Timothy Mitchell begins with the history of coal power to tell a radical new story about the rise of democracy. Coal was a source of energy so open to disruption that oligarchies in the West became vulnerable for the first time to mass demands for democracy. In the mid-twentieth century, however, the development of cheap and abundant energy from oil, most notably from the Middle East, offered a means to reduce this vulnerability to democratic pressures. The abundance of oil made it possible for the first time in history to reorganize political life around the management of something now called "the economy" and the promise of its infinite growth. The politics of the West became dependent on an undemocratic Middle East. In the twenty-first century, the oil-based forms of modern democratic politics have become unsustainable. Foreign intervention and military rule are faltering in the Middle East, while governments everywhere appear incapable of addressing the crises that threaten to end the age of carbon democracy—the disappearance of cheap energy and the carbon-fuelled collapse of the ecological order. In making the production of energy the central force shaping the democratic age, Carbon Democracy rethinks the history of energy, the politics of nature, the theory of democracy, and the place of the Middle East in our common world.

This book offers a bold and original perspective on the 1914 Ludlow Massacre and the "Great Coalfield War." In a story of transformation, Andrews illuminates the causes and consequences of the militancy that erupted in colliers' strikes over the course of nearly half a century.

*Includes pictures *Includes accounts of the coal wars from Mother Jones and other important participants *Includes online resources and a bibliography for further reading *Includes a table of contents "I'm not a humanitarian, I'm a hell-raiser." - Mother Jones America is famous around the world for being the land of opportunity, and in many respects it has been for the nearly 400 years since its colonization. However, that opportunity has always come at some sort of price. In the times of wooden sailing vessels, men and women risked life and limb to sail across the Atlantic on small, creaking ships, but later, transportation became safer and easier with the invention of the coal powered steam engine. Over time, coal came to be used to power other advances in industry and technology, such as plants that produced steel and electricity. By the dawn of the 20th century, it seemed that there was nothing that the country could not accomplish, and that the future was brighter than ever. But then, as always, there was the price. The vast majority of people burning coal to heat their farms and homes, and those watching skyscrapers rise over the city's landscape, likely never stopped to think about the price thousands of miners across the country were paying for these and other conveniences. Many never knew that coal had to be dug from the ground, typically in dark mines where dust poisoned miners' lungs, and that these men barely made enough to feed and clothe their families despite their hard days of toil. The people using the coal wanted it to be cheap, the miners wanted to earn enough money to survive, and the companies wanted to turn a profit. In some ways, it seems safe to say that conflict was inevitable, but while there were numerous labor disputes during the early decades of the 20th century, few were as violent as the one that erupted in the hills of West Virginia in 1912. In fact, this conflict, which lasted about a decade, has rightly been called a war because men and women killed and were killed on its battlefields, culminating with the largest domestic insurrection since the Civil War in 1921. The coal companies' army was a hired force, professional gunfighters brought in to stop miners. But while they had the best training and the best weapons, they did not have Mother Jones - Mary Harris Jones - perhaps the most inspirational union organizer in United States history. With the help of Frank Keeney and other miners like him, Jones successfully brought the owners to their knees and won the right to unionize for miners who had only dreamed it might be possible. Now that a century has passed and mining is at least somewhat safer than it was, those working today can thank Jones and Keeney, not to mention the ones who died at the hand of hired guns, for what freedom they do have to fight for a living wage. *The West Virginia Coal Wars: The History of the 20th Century Conflict Between Coal Companies and Miners* looks at the tumultuous fight on both sides of the lines. Along with pictures of important people, places, and events, you will learn about the West Virginia mine wars like never before, in no time at all.

This book is available as open access through the Bloomsbury Open Access programme and is available on www.bloomsburycollections.com. *Fuel: An Ecocritical History* is the first book to chart our changing attitudes to fuel and energy through the literature and culture of the modern era, focusing on the 18th-century to the present. Reading a wide range of writers from Blake, Austen and Dickens to Upton Sinclair and Edward Abbey, Heidi Scott explores how our move from a pre-industrial reliance on biomass and elemental energy sources to our current dependence on the fossil fuels of coal, oil and natural gas have fundamentally shaped human identity and culture. The book's Anthropocene perspective reshapes our view of energy history and climate change, and *Fuel* looks forward to ways in which we can reimagine our culture away from the fossil fuel paradigm towards a more sustainable energy future driven by renewable, elemental energy.

Coal has transformed societies, and shaped the fate of nations. It launched empires and triggered wars. Above all, it fuelled the Industrial Revolution in Britain, propelling the rise of a small rural kingdom into the greatest commercial empire in the world. Taking us on a rich historical journey that begins on the banks of the river Tyne, Barbara Freese explores the profound role coal has played in human history, and continues to play in today's world. The first half of the book is set in Britain, and tells how coal transformed Britain and ushered in the industrial age. The rest of the book looks at America and China, at the birth of the unions, and the closing of the mines, and at the energy industry today. With oil prices on the rise and no end in sight to our insatiable appetite for energy, the world is turning again to coal.

Coal, gas, and oil have powered our societies for hundreds of years. But the pace at which we use them changed dramatically in the twentieth centu-

ry: of all the fossil fuels ever consumed, more than half were burnt up in the past fifty years alone, the vast majority of that within a single generation. Most worrying of all, this dramatic acceleration has occurred against the backdrop of an increasingly unanimous scientific consensus: that their environmental impact is devastating and potentially irreversible. In *Burning Up*, Simon Pirani recounts the history of the relentless rise of fossil fuels in the past half century, and lays out the ways in which the expansion of the global capitalist economy has driven it forward. Dispelling common explanations that foreground Western consumerism, as well as arguments about unsustainable population growth, Pirani offers instead an insightful intervention in what is arguably the crisis of our time.

Since the late 18th century, when it emerged as a source of heating and, later, steam power, coal has brought untold benefits to mankind. Even today, coal generates almost 45 percent of the world's power. Our modern technological society would be inconceivable without coal and the energy it provides. Unfortunately, that society will not survive unless we wean ourselves off coal. The largest single source of greenhouse gases, coal is responsible for 43 percent of the world's carbon emissions. Richard Martin, author of *SuperFuel*, argues that to limit catastrophic climate change, we must find a way to power our world with less polluting energy sources, and we must do it in the next couple of decades—or else it is "game over." It won't be easy: as coal plants shut down across the United States, and much of Europe turns to natural gas, coal use is growing in the booming economies of Asia—particularly China and India. Even in Germany, where nuclear power stations are being phased out in the wake of the Fukushima accident, coal use is growing. Led by the Sierra Club and its ambitious "Beyond Coal" campaign, environmentalists hope to drastically reduce our dependence on coal in the next decade. But doing so will require an unprecedented contraction of an established, lucrative, and politically influential worldwide industry. Big Coal will not go gently. And its decline will dramatically change lives everywhere—from Appalachian coal miners and coal company executives to activists in China's nascent environmental movement. Based on a series of journeys into the heart of coal land, from Wyoming to West Virginia to China's remote Shanxi Province, hundreds of interviews with people involved in, or affected by, the effort to shrink the industry, and deep research into the science, technology, and economics of the coal industry, *Coal Wars* chronicles the dramatic stories behind coal's big shutdown—and the industry's desperate attempts to remain a global behemoth. A tour de force of literary journalism, *Coal Wars* will be a milestone in the climate change battle.

This manual explains the evolution of British coal mining from the 18th to the 20th century, the heyday of British mining, and examines every aspect of life as a pit worker.

The fascinating, often surprising story of how a simple black rock has altered the course of history. Prized as "the best stone in Britain" by Roman invaders who carved jewelry out of it, coal has transformed societies, powered navies, fueled economies, and expanded frontiers. It made China a twelfth-century superpower, inspired the writing of the Communist Manifesto, and helped the northern states win the American Civil War.

Cultural historian Jeff Biggers takes us to the dark amphitheatre ruins of his family's nearly 200 - year - old hillside homestead that has been strip - mined on the edge of the first federally recognized Wilderness Site in southern Illinois. In doing so' he not only comes to grips with his own denied backwoods heritage' but also chronicles a dark and missing chapter in the American experience; the historical nightmare of coal outside of Appalachia' serving as an expos of a secret legacy of shame and resiliency.

While most studies of labor in the coal industry focus on the struggle to organize unions, this work offers a more diverse and quantitative examination of the labor market. It regards the economic lives of the bituminous coal miners in the early twentieth century. Fishback's analytic framework encompasses competition among employers for labor, the legal environment, institutional development in response to transactions costs as well as the impact of labor unions on the coal industry. Utilizing economic theory and statistics, Fishback reveals the models hidden in the descriptions of events, and then tests their internal consistency as well as the hypotheses they generate.

Few people in America today live with the dangers and deprivations that Appalachian coal mining families experience. But to the eighteen West Virginia women Carol Giesen interviewed for this book, hard times are just everyday life. These coal miners' wives, ranging in age from late teens to eighty-five, tell of a way of life dominated by coal mining -- and shadowed by a constant fear of death or injury to a loved one. From birth to old age, they experience the social and economic pressures of the coal mining industry. Few families in these communities earn their living in any job outside a coal mine, and most young men and women find no advantage in completing their education. Women whose stresses and strengths have seldom been disclosed reveal here their personal stories, their understanding of the dangers of coal mining, their domestic concerns, the place of friends and faith in their lives, and their expectations of the future. What emerges is a deeply moving story of determination in the face of adversity. Over and over, these women deal with the frustrations caused by strikes, layoffs, and mine closings, often taking any jobs they can find while their husbands are out of work. Endlessly; their home concerns revolve around protecting their husbands from additional work or worry. Always there is fear for their husbands' lives and the pervasive anger they feel toward the mining companies. For some, there is also the pain of losing a loved one to the mines. Behind these women's acceptance of their circumstances lies a pragmatic understanding of the politics of mining and of the communities in which they live. Giesen's insights into the experiences of miners' wives contribute much to our understanding of the impact of industry, economics, and politics on women's lives.

Going as far back as the thirteenth century, Britons mined and burned coal. Britain's supremacy in the nineteenth century depended in large part on its vast deposits of coal, which powered industry, warmed homes, and cooked food. As coal consumption skyrocketed, the air in Britain's cities and towns filled with ever-greater and denser clouds of smoke. Yet, for much of the nineteenth century, few people in Britain even considered coal smoke to be pollution. *Inventing Pollution* examines the radically new understanding of pollution that emerged in the late nineteenth century, one that centered not on organic decay but on coal combustion. This change, as Peter Thorsheim argues, gave birth to the smoke-abatement movement and to new ways of thinking about the relationships among humanity, technology, and the environment. Even as coal production in Britain has plummeted in recent decades, it has surged in other countries. This reissue of Thorsheim's far-reaching study includes a new preface that reveals the book's relevance to the contentious national and international debates—which aren't going away anytime soon—around coal, air pollution more generally, and the grave threat of human-induced climate change.

How corporate denial harms our world and continues to threaten our future. Corporations faced with proof that they are hurting people or the planet have a long history of denying evidence, blaming victims, complaining of witch hunts, attacking their critics' motives, and otherwise rationalizing their harmful activities. Denial campaigns have let corporations continue dangerous practices that cause widespread suffering, death, and environmental destruction. And, by undermining social trust in science and government, corporate denial has made it harder for our democracy to function. Barbara Freese, an environmental attorney, confronted corporate denial years ago when cross-examining coal industry witnesses who were disputing the science of climate change. She set out to discover how far from reality corporate denial had led society in the past and what damage it had done. Her resulting, deeply-researched book is an epic tour through eight campaigns of denial waged by industries defending the slave trade, radium consumption, unsafe cars, leaded gasoline, ozone-destroying chemicals, tobacco, the investment products that caused the financial crisis, and the fossil fuels destabilizing our climate. Some of the denials are appalling (slave ships are festive). Some are absurd (nicotine is not addictive). Some are dangerously comforting (natural systems prevent ozone depletion). Together they reveal much about the group dynamics of delusion and deception. Industrial-Strength Denial delves into the larger social dramas surrounding these denials, including how people outside the industries fought back using evidence and the tools of democracy. It also explores what it is about the corporation itself that reliably promotes such denial, drawing on psychological research into how cognition and morality are altered by tribalism, power, conflict, anonymity, social norms, market ideology, and of course, money. Industrial-Strength Denial warns that the corporate form gives people tremendous power to inadvertently cause harm while making it especially hard for them to recognize and feel responsible for that harm.

A comprehensive account of how energy has shaped society throughout history, from pre-agricultural foraging societies through today's fossil fuel-driven civilization. "I wait for new Smil books the way some people wait for the next 'Star Wars' movie. In his latest book, *Energy and Civilization: A History*, he goes deep and broad to explain how innovations in humans' ability to turn energy into heat, light, and motion have been a driving force behind our cultural and economic progress over the past 10,000 years. —Bill Gates, *Gates Notes*, Best Books of the Year *Energy* is the only universal currency; it is necessary for getting anything done. The conversion of energy on Earth ranges from terra-forming forces of plate tectonics to cumulative erosive effects of raindrops. Life on Earth depends on the photosynthetic conversion of solar energy into plant biomass. Humans have come to rely on many more energy flows—ranging from fossil fuels to photovoltaic generation of electricity—for their civilized existence. In this monumental history, Vaclav Smil provides a comprehensive account of how energy has shaped society, from pre-agricultural foraging societies through today's fossil fuel-driven civilization. Humans are the only species that can systematically harness energies outside their bodies, using the power of their intellect and an enormous variety of artifacts—from the simplest tools to internal combustion engines and nuclear reactors. The epochal transition to fossil fuels affected everything: agriculture, industry, transportation, weapons, communication, economics, urbanization, quality of life, politics, and the environment. Smil describes humanity's energy eras in panoramic and interdisciplinary fashion, offering readers a magisterial overview. This book is an extensively updated and expanded version of Smil's *Energy in World History* (1994). Smil has incorporated an enormous amount of new material, reflecting the dramatic developments in energy studies over the last two decades and his own research over that time.

An Oprah.com "Must-Read Book" Award-winning journalist Jeanne Marie Laskas reveals "enlightening, entertaining, and often poignant"* profiles of America's working class—the forgotten men and women who make our country run. Take the men of Hopedale Mining company in Cadiz, Ohio. Laskas spent several weeks with them, both below and above ground, and by the end, you will know not only about their work, but about Pap and his dying mom, Smitty and the mail-order bride who stood him up at the airport, and Scotty and his thwarted dreams of becoming a boxing champion. That is only one hidden world. Others that she explores: an Alaskan oil rig, a migrant labor camp in Maine, the air traffic control center at LaGuardia Airport in New York, a beef ranch in Texas, a landfill in California, a long-haul trucker in Iowa, a gun shop in Arizona, and the Cincinnati Ben-Gals cheerleaders, mere footnotes in the moneymaking spectacle that is professional football. "Jeanne Marie Laskas is a reporting and writing powerhouse. She doesn't just interview the people who dig our coal and extract our oil, she goes deep into the mines and tundra with them. With beauty, wit, curiosity, and grace, she finds the hidden soul of America. *Hidden America* is essential reading." —Rebecca Skloot, author of *The Immortal Life of Henrietta Lacks*

The book will be a single source that provides an introduction to coal, discusses the history of using coal (both good and bad experiences), compares coal to other energy sources, discusses the impact of coal usage on the environment, summarizes the legislative history specific to coal, presents current and future technologies for coal utilization, discusses emissions control strategies for power plants, and a presents 'fair' overview of coal's importance to the U.S.'s economy and security. - Presents coal's increasing role in providing energy independence to nations - Covers current energy usage, environmental issues, and coal energy technologies - Provides a comprehensive discussion of technical and policy issues regarding the use of

coal

From the bestselling historian and acclaimed broadcaster 'A rich social history ... Paxman's book could hardly be more colourful, and I enjoyed each page enormously' DOMINIC SANDBROOK, SUNDAY TIMES 'Vividly told ... Paxman's fine narrative powers are at their best' THE TIMES Coal is the commodity that made Britain. Dirty and polluting though it is, this black rock has acted as a midwife to genius. It drove industry, religion, politics, empire and trade. It powered the industrial revolution, turned Britain into the first urban nation and is the industry that made almost all others possible. In this brilliant social history, Jeremy Paxman tells the story of coal mining in England, Scotland and Wales from Roman times, through the birth of steam power to war, nationalisation, pea-souper smogs, industrial strife and the picket lines of the Miner's Strike. Written in the captivating style of his bestselling book *The English*, Paxman ranges widely across Britain to explore stories of engineers and inventors, entrepreneurs and industrialists - but whilst coal inevitably helped the rich become richer, the story told by *Black Gold* is first and foremost a history of the working miners - the men, women and often children who toiled in appalling conditions down in the mines; the villages that were thrown up around the pit-head. Almost all traces of coal-mining have vanished from Britain but with this brilliant history, *Black Gold* demonstrates just how much we owe to the black stuff.

A groundbreaking history of architecture told through the relationship between buildings and energy The story of architecture is the story of humanity. The buildings we live in, from the humblest pre-historic huts to today's skyscrapers, reveal our priorities and ambitions, our family structures and power structures. And to an extent that hasn't been explored until now, architecture has been shaped in every era by our access to energy, from fire to farming to fossil fuels. In this ground-breaking history of world architecture, Barnabas Calder takes us on a dazzling tour of some of the most astonishing buildings of the past fifteen thousand years, from Uruk, via Ancient Rome and Victorian Liverpool, to China's booming megacities. He reveals how every building - from the Parthenon to the Great Mosque of Damascus to a typical Georgian house - was influenced by the energy available to its architects, and why this matters. Today architecture consumes so much energy that 40% of the world's greenhouse gas emissions come from the construction and running of buildings. If we are to avoid catastrophic climate change then now, more than ever, we need beautiful but also intelligent buildings, and to retrofit - not demolish - those that remain. Both a celebration of human ingenuity and a passionate call for greater sustainability, this is a history of architecture for our times.

Boom - Crisis - Heritage, these terms aptly outline the history of global coal mining after 1945. The essays collected in this volume explore this history with different emphases and questions. The range of topics also reflects this broad approach. The first section contains contributions on political, social and economic history. They address the European energy system in the globalised world of the 20th and 21st centuries as well as specific social policies in mining regions. The second section then focuses on the medialisation of mining and its legacies, also paying attention to the environmental history of mining. The anthology, which goes back to a conference of the same name at the Deutsches Bergbau-Museum Bochum, thus offers a multifaceted insight into the research field of modern mining history.

Long dismissed as a relic of a bygone era, coal is back -- with a vengeance. Coal is one of the nation's biggest and most influential industries -- Big Coal provides more than half the electricity consumed by Americans today -- and its dominance is growing, driven by rising oil prices and calls for energy independence. Is coal the solution to America's energy problems? On close examination, the glowing promise of coal quickly turns to ash. Coal mining remains a deadly and environmentally destructive industry. Nearly forty percent of the carbon dioxide released into the atmosphere each year comes from coal-fired power plants. In the last two decades, air pollution from coal plants has killed more than half a million Americans. In this eye-opening call to action, Goodell explains the costs and consequences of America's addiction to coal and discusses how we can kick the habit.

Normal0falsefalsefalseMicrosoftInternetExplorer4Blocton chronicles the history of a community built on coal. In 1883 two entrepreneurs--Truman Aldrich, a New York engineer, and Cornelius Cadle, a former Union Army officer--created the Cahaba Coal Mining Company and built a railroad eight miles into the wilderness of northern Bibb County to tap thick veins of coal deep underground. There, they built the town of Blocton and beside the town rose a sister suburb, West Blocton. In 1892 the Tennessee Coal, Iron, and Railroad Company took control of the Blocton mines, and fifteen years later US Steel swallowed the Tennessee company. Blocton coal was in high demand during World War I and production continued. By the end of the 1920s, however, a devastating fire, mine closure, and the stock market crash devastated the area. Blocton is more than a history of wealthy men, great deeds, greater crises, and giant corporations. It recounts the hopes and dreams, accomplishments and everyday tragedies of the miners, housewives, store keepers, teachers, and all the people who gave personality and perseverance to the community.

William M. Cavert investigates the origins of urban air pollution, explaining how this problem arose during the early modern period.

Retrospective: 9.