Understanding Electric Utilities And De Regulation Power Engineering Willis

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Electric Utilities and Independent Power Richard K. Miller 1995 This report-style reference is designed to serve as a strategic planning tool. The author provides a complete analysis of eery aspect of the current competition-driven market. Current trends in the utilization of new technologies by power producers is also examined.

Understanding Electric Utilities and De-Regulation H. Lee Willis 2018-10-03 Power interruptions of the scale of the North American Blackout of 2003 are rare, but they still loom as a possibility. Will the aging infrastructure fail because deregulated monopolies have no financial incentives to upgrade? Is centralized planning becoming subordinate to market forces? Understanding Electric Utilities and De-Regulation, Second Edition provides an updated, non-technical description that sheds light on the nature of the industry and the issues involved in its transition away from a regulated environment. The book begins by broadly surveying the industry, from a regulated utility structure to the major concepts of de-regulation to the history of electricity, the technical aspects, and the business of power. Then, the authors delve into the technologies and functions on which the industry operates; the many ways that power is used; and the various means of power generation, including central generating stations, renewable energy, and single-household size generators. The authors then devote considerable attention to the details of regulation and de-regulation. To conclude, one new chapter examines aging infrastructures and reliability of service, while another explores the causes of blackouts and how they can be prevented. Based on the authors' extensive experience, Understanding Electric Utilities and De-Regulation, Second Edition offers an up-to-date perspective on the major issues impacting the daily operations as well as the long-term future of the electric utilities industry.

Two Essays on the Impact of Deregulation on Labor in the Electric Power Industry Chiung-Ying Cheng 2002

The Power Brokers Jeremiah D. Lambert 2015-08-28 How the interplay between government regulation and the private sector has shaped the electric industry, from its nineteenth-century origins to twenty-first-century market restructuring. For more than a century, the interplay between private, investor-owned electric utilities and government regulators has shaped the electric power industry in the United States. Provision of an essential service to largely dependent consumers invited government oversight and ever more sophisticated market intervention. The industry has sought to manage, co-opt, and profit from government regulation. In The Power Brokers, Jeremiah Lambert maps this complex interaction from the late nineteenth century to the present day. Lambert's narrative focuses on seven important industry players: Samuel Insull, the principal industry architect and prime mover; David Lilienthal, chairman of the Tennessee Valley Authority (TVA), who waged a desperate battle for market share; Don Hodel, who presided over the Bonneville Power Administration (BPA) in its failed attempt to launch a multi-plant nuclear power program; Paul Joskow, the MIT economics professor who foresaw a restructured and competitive electric power industry; Enron's Ken Lay, master of political influence and market-rigging; Amory Lovins, a pioneer proponent of sustainable power; and Jim Rogers, head of Duke Energy, a giant coal-fired utility threatened by decarbonization. Lambert tells how Insull built an empire in a regulatory vacuum, and how the government entered the electricity marketplace by making cheap hydropower available through the TVA. He describes the failed overreach of the BPA, the rise of competitive electricity markets, Enron's market manipulation, Lovins's radical vision of a decentralized industry powered by renewables, and Rogers's remarkable effort to influence cap-and-trade legislation. Lambert shows how the power industry has sought to use regulatory change to preserve or secure market dominance and how rogue players have gamed imperfectly restructured electricity markets. Integrating regulation and competition in this industry has proven a difficult experiment.

Electric Utilities and Independent Power Richard Kendall Miller 1996 Other important topics include the impact of air pollution control regulations on the industry and current trends in the utilization of new technologies by power producers.

The Effects of De-Regulation on the US Electric Power Market Verena Keller 2010-11-10 Examination Thesis from the year 2010 in the subject Economy - Theory of Competition, Competition Policy, grade: 2,0, Friedrich-Alexander University Erlangen-Nuremberg (Institut für Wirtschaftswissenschaften), language: English, abstract: Thomas Edison and Joseph Wilson Swan revolutionized the use of electricity by inventing the light bulb in 1879 (cf. Center for Solid State Science). With this new invention people finally had the possibility to light their homes and streets at night. Obviously this entailed a wide range of advantages in terms of the standard of economy, security, comfort and much more. However, with the invention and spread of the light bulb another problem occurred simultaneously: the need for nationwide electric power supply. Due to the lack of devices, there had been no need to supply power on the large scale before the invention of the light bulb. Now a solution for providing the populace with electric power had to be found. It was again Edison, who therefore laid the foundation, three years after he had in-vented the "artificial light". Simultaneously he intended, as can be deducted from the quotation above, that electricity became available and affordable for every-one.

Power Loss Richard F. Hirsh 2002-07-26 A perceptive account of the deregulation of the electric power industry.

The California Electricity Crisis Christopher Weare 2003

Reinventing Electric Utilities Edward Smeloff 1997 Traditionally protected as monopolies, electric utilities are now being caught in the fervor for deregulation that is sweeping the country. Nearly forty states have enacted or are considering laws and regulations that will profoundly alter the way the electric utility industry is governed. Concerned citizens are beginning to ponder the environmental implications of such a change, and while many fear that the pressure of competition will exacerbate environmental problems, others argue that deregulation provides a tremendous opportunity for citizens to work toward promoting cleaner energy and a more sustainable way of life.In Reinventing Electric Utilities, Ed Smeloff and Peter Asmus consider the challenges for citizens and the utility industry in this new era of competition. Through an in-depth case study of the Sacramento Municipal Utility District (SMUD), a once-troubled utility that is now widely regarded as a model for energy efficiency and renewable energy development, they explore the changes that have occurred in the utility industry, and the implications of those changes for the future. The SMUD portrait is complemented by regional case studies of Portland General Electric and the Washington Public Power Supply System, the New England Electric Service, Northern States Power, the Electricity Reliability Council of Texas, and others that highlight the efforts of citizen groups and utilities to eliminate unproductive and environmentally damaging sources of power and to promote the use of new, cleaner energy technologies.The authors present and explain some of the fundamental principles that govern restructuring, while acknowledging that solutions will depend upon the unique resource needs, culture, and utility structure of each particular region. Smeloff and Asmus argue that any politically sustainable restructuring of the electric services industry must address the industry's high capital cost commitments and environmental burdens.Throughout, they make the case that with creative leadership, open and competitive markets, and the active participation of citizens, this upheaval offers a unique opportunity for electric utilities to lessen the burden of electricity production on the environment and reduce the cost of electric services through the use of more competitive, cleaner power sources.While neither technological innovation nor the magic of the market will in and of itself reinvent the electric utility industry, the

influence of those dynamic forces must be understood. Reinventing Electric Utilities is an important work for policymakers, energy professionals, and anyone concerned about the future of the electric services industry.

Community Impacts of Deregulation 1987

Effective Power Marketing Clark W. Gellings 1997 Deregulation and a rissing tide of consumerism is forcing electric utilities to better understand their customers and to change to meet their needs. In this new book, author Clark W. Gellings shows you how to develop and use bold marketing strategies to promote your utility in this new electric power industry. Drawing on his years of experience, Gellings highlights how deregulation has and will change the function and structure of current utilities, and in turn how these changes will affect each utility's marketing strategy. In this book gellings: Ties ongoing technological innovation to marketing Explains consumerism and marketing to electric company executives who previously may have had such responsibilities Explains how deregulation is changing vertically integrated utilities into energy service companies, transmission and distribution companies, and power marketers Clarifies the roles of traditional utilities, marketers, brokers, and aggregators. About the author: Clark W. Gellings is Vice President, Customer Systems, and CEO, epriCSG, at the Electric Power Research Institute (EPRI) in Palo Alto, California.The Customer Systems Group manages research and development programs to deliver technologies, planning tools, and information that enhance the value of energy services. He is a registered professional engineer and a Fellow of IEEE and IES. He has written numerous other books including: Demand Side Management Planning, Demand Site Management: Concepts and Methods, and Utility Marketing Strategies: Competition and the Economy.

Power System Operations and Electricity Markets Fred I. Denny 2017-12-19 The electric power industry in the U.S. has undergone dramatic changes in recent years. Tight regulations enacted in the 1970's and then de-regulation in the 90's have transformed it from a technology-driven industry into one driven by public policy requirements and the open-access market. Now, just as the utility companies must change to ensure their survival, engineers and other professionals in the industry must acquire new skills, adopt new attitudes, and accommodate other disciplines. Power System Operations and Electricity Markets provides the information engineers need to understand and meet the challenges of the new competitive environment. Integrating the business and technical aspects of the restructured power industry, it explains, clearly and succinctly, how new methods for power systems operations and energy marketing relate to public policy, regulation, economics, and engineering science. The authors examine the technologies and techniques currently in use and lay the groundwork for the coming era of unbundling, open access, power marketing, self-generation, and regional transmission operations. The rapid, massive changes in the electric power industry and in the economy have rendered most books on the subject obsolete. Based on the authors' years of front-line experience in the industry and in regulatory organizations, Power System Operations and Electricity Markets is current, insightful, and complete with Web links that will help readers stay up to date.

Power Loss Richard F. Hirsh 2002-07-26 In the late 1990s, the formerly staid and monopolistic electric utility industry entered an era of freewheeling competition and deregulation, allowing American consumers to buy electricity from any company offering it. In this book, Richard F. Hirsh explains how and why this radical restructuring has occurred. Hirsh starts by describing the successful campaign waged by utility managers in the first decade of the twentieth century to protect their industry from competition. The regulated system that emerged had the unanticipated consequence of endowing utility managers with great political and economic power. Seven decades later, a series of largely unanticipated events, including technological stagnation in traditional generating equipment, the 1973 energy crisis, and the rise of the environmental movement, undermined the managers' control of the system. New players, such as academics, environmental advocates, politicians, and potential competitors, wrested control from power company managers by challenging utilities' standing as "natural monopolies" and by questioning whether their firms provided universal benefits. In other words, the once-closed system came under increasing pressure to transform itself. Hirsh follows the flow of power as this transformation occurred. He also examines the relationship between technological change and regulation, showing how innovations such as cogeneration and renewable energy technologies stimulated questions about the value of government oversight of the system. And he shows how the increasing prominence of ideas such as conservation, energy efficiency, and free markets helped propel the system toward open competition. Though the new electric utility system is still in its infancy, Hirsh's perceptive account of its birth will help readers think more rationally about its future.

Competitive Issues in Electricity Deregulation United States. Congress. House. Committee on the Judiciary 2000

Congress and the Utility Deregulation Debate 1997

Electric Choices Andrew N. Kleit 2007 Electricity is one of the largest and most vital industries in the U.S. economy, with sales exceeding $200 billion annually. While electricity represents the backbone of commerce, industry, and household production, the structure of the industry has been changing in rather dramatic ways. After being heavily regulated for more than a century by local, state, regional, and federal authorities, deregulation is taking center stage. In general, deregulation results in lower prices, more product choices, and more rapid technological advances. Conversely, rate regulation has inherent flaws, including the encouragement of waste and inefficiency, and a retarding of innovation. There is little doubt to the contributors of this book that putting regulation aside offers enormous efficiency gains in the production of electricity. But can market forces handle the delicate matter of transmitting electricity when the simple model of supply and demand must be more precise than other goods and services? How much regulation does the electric industry need? The essays in this timely collection explore these difficult questions and propose a new, market-based plan to improve America's electrical future. Published in cooperation with The Independent Institute.

The Deregulation of Electric Utilities in California and Its Effect on Navy Installations Patrick J. O'Shea 1997-06-01 On January 1, 1998, California will be the first state to deregulate its electricity industry. Deregulation is expected to reduce the high rates paid throughout the state by allowing competition, not regulators, to determine rates. Deregulation will dissolve the monopoly of the electricity industry by allowing customers to choose who will supply their electricity. Competition will emerge in the generation market, where transactions between consumers and suppliers will be free and open. Under regulation, most customers do not have a choice in their electricity supplier. Their supplier is usually determined by their geographic location. This thesis researches the differences between the regulated and deregulated rate structures and provides a cost comparison for a Navy organization classified as a large commercial/industrial user of electricity. There are many aspects of deregulation that are not yet determined, but the initial comparison indicates deregulation may save Navy installations money. If deregulation progresses as planned, additional future saving may occur.

Impacts of Electric Utility Deregulation on Property Taxation Philip Burling 2000 Deregulation signaled a new environment for the taxation of public utility property in the U.S. This book of formal papers and commentaries from a 1999 Lincoln Institute seminar brings together varying perspectives on the taxation of deregulated electric utility facilities and considers the impacts of deregulation on these properties.

The End of a Natural Monopoly Daniel H. Cole 2003-07-17 This book addresses the fundamental issues underlying the debate over electric power regulation and deregulation. After decades of the presumption that the electric power industry was a natural monopoly, recent times have seen a trend of deregulation followed by panicked re-regulation.

America's Electric Utilities Leonard S. Hyman 1985

The Power of Change National Academies of Sciences, Engineering, and Medicine 2016-09-30 Electricity, supplied reliably and affordably, is foundational to the U.S. economy and is utterly indispensable to modern society. However, emissions resulting from many forms of electricity generation create environmental risks that could have significant negative economic, security, and human health consequences. Large-scale installation of cleaner power generation has been generally hampered because greener technologies are more expensive than the technologies that currently produce most of our power. Rather than trade affordability and reliability for low emissions, is there a way to balance all three? The Power of Change: Innovation for Development and Deployment of Increasingly Clean Energy Technologies considers how to speed up innovations that would dramatically improve the performance and lower the cost of currently available technologies while also developing new advanced cleaner energy technologies. According to this report, there is an opportunity for the United States to continue to lead in the pursuit of increasingly clean, more efficient electricity through innovation in advanced technologies. The Power of Change: Innovation for Development and Deployment of Increasingly Clean Energy Technologies makes the case that America's advantagesâ€"world-

class universities and national laboratories, a vibrant private sector, and innovative states, cities, and regions that are free to experiment with a variety of public policy approachesâ€"position the United States to create and lead a new clean energy revolution. This study focuses on five paths to accelerate the market adoption of increasing clean energy and efficiency technologies: (1) expanding the portfolio of cleaner energy technology options; (2) leveraging the advantages of energy efficiency; (3) facilitating the development of increasing clean technologies, including renewables, nuclear, and cleaner fossil; (4) improving the existing technologies, systems, and infrastructure; and (5) leveling the playing field for cleaner energy technologies. The Power of Change: Innovation for Development and Deployment of Increasingly Clean Energy Technologies is a call for leadership to transform the United States energy sector in order to both mitigate the risks of greenhouse gas and other pollutants and to spur future economic growth. This study's focus on science, technology, and economic policy makes it a valuable resource to guide support that produces innovation to meet energy challenges now and for the future.

Operation of Restructured Power Systems Kankar Bhattacharya 2012-12-06 Deregulation is a fairly new paradigm in the electric power industry. And just as in the case of other industries where it has been introduced, the goal of deregulation is to enhance competition and bring consumers new choices and economic benefits. The process has, obviously, necessitated reformulation of established models of power system operation and control activities. Similarly, issues such as system reliability, control, security and power quality in this new environment have come in for scrutiny and debate. In this book, we attempt to present a comprehensive overview of the deregulation process that has developed till now, focussing on the operation aspects. As of now, restructured electricity markets have been established in various degrees and forms in many countries. This book comes at a time when the deregulation process is poised to undergo further rapid advancements. It is envisaged that the reader will benefit by way of an enhanced understanding of power system operations in the conventional vertically integrated environment vis-a-vis the deregulated environment. The book is aimed at a wide range of audience- electric utility personnel involved in scheduling, dispatch, grid operations and related activities, personnel involved in energy trading businesses and electricity markets, institutions involved in energy sector financing. Power engineers, energy economists, researchers in utilities and universities should find the treatment of mathematical models as well as emphasis on recent research work helpful.

A Primer on Electric Utilities, Deregulation, and Restructuring of U.S. Electricity Markets 2002 This primer is offered as an introduction to utility restructuring to better prepare readers for ongoing changes in public utilities and associated energy markets. It is written for use by individuals with responsibility for the management of facilities that use energy, including energy managers, procurement staff, and managers with responsibility for facility operations and budgets. The primer was prepared by the Pacific Northwest National Laboratory under sponsorship from the U.S. Department of Energy?s Federal Energy Management Program. The impetus for this primer originally came from the Government Services Administration who supported its initial development.

The Evolution of Electric Power Transmission Under Deregulation John A. Casazza 2000 Will the bulk electric power system be as reliable in the future as it has been in the past? Those who have addressed this question have generally only dealt with generating capacity. But there is another side to this equation - the transmission system - and to ignore it is to focus on only half the problem.

Electric Utility Deregulation U. S. Staff 1998

Markets for Power Paul L. Joskow 1988-08-01 This timely study evaluates four generic proposals for allowing free market forces toreplace government regulation in the electric power industry and concludes that none of thederegulation alternatives considered represents a panacea for the performance failures associatedwith things as they are now. It proposes a balanced program of regulatory reform and deregulationthat promises to improve industry performance in the short run, resolve uncertainties about thecosts and benefits of deregulation, and positions the industry for more extensive deregulation inthe long run should interim experimentation with deregulation, structural, and regulatory reformsmake it desirable.The book integrates modern microeconomic theory with a comprehensive analysis ofthe economic, technical, and institutional characteristics of modern electrical power systems. Itemphasizes that casual analogies to successful deregulation efforts in other sectors of the economyare an inadequate and potentially misleading basis for public policy in the electric power industry,which has economic and technical characteristics that are quite different from those in otherderegulated industries.Paul L. Joskow is Professor of Economics at MIT, author of ControllingHospital Costs (MIT Press 1981) and coauthor with Martin L. Baughman and Dilip P. Kamat of ElectricPower in the United States (MIT Press 1979). Richard Schmalensee, also at MIT, is Professor ofApplied Economics, author of The Economics of Advertising and The Control of Natural Monopolies, andeditor of The MIT Press Series, Regulation of Economic Activity.

A Primer on Electric Utilities, Deregulation, and Restructuring of U.S. Electricity Markets Mike Warwick 2002

Electricity Economics Martin Schetzen 2003-02-14 Written originally as a manual for the Federal Energy Commission to train regional rate regulators, this is a clear, comprehensive primer on the principles of economics and finance underlying the regulation of electricity markets and the deregulation of electricity generation.

Understanding Electric Power Systems Frank Delea 2010-03-01 Technological advances and changes in government policy and regulation have altered the electric power industry in recent years and will continue to impact it for quite some time. Fully updated with the latest changes to regulation, structure, and technology, this new edition of Understanding Electric Power Systems offers a real-world view of the industry, explaining how it operates, how it is structured, and how electricity is regulated and priced. It includes extensive references for the reader and will be especially useful to lawyers, government officials, regulators, engineers, and students, as well as the general public. The book explains the physical functioning of electric power systems, the electric power business in today's environment, and the related institutions, including recent changes in the roles of the Federal Energy Regulatory Commission and the North American Reliability Company. Significant changes that are affecting the industry are covered in this new edition, including: The expanded role of the federal government in the planning and operation of the nation's electric utilities New energy laws and a large number of FERC regulations implementing these laws Concerns over global warming and potential impacts on the electric industry Pressures for expansion of the electric grid and the implementation of "smart-grid" technologies The growing importance of various energy-storage technologies and renewable energy sources New nuclear generation technologies The 2009 economic stimulus package

Enhancing the Resilience of the Nation's Electricity System National Academies of Sciences, Engineering, and Medicine 2017-10-25 Americans' safety, productivity, comfort, and convenience depend on the reliable supply of electric power. The electric power system is a complex "cyber-physical" system composed of a network of millions of components spread out across the continent. These components are owned, operated, and regulated by thousands of different entities. Power system operators work hard to assure safe and reliable service, but large outages occasionally happen. Given the nature of the system, there is simply no way that outages can be completely avoided, no matter how much time and money is devoted to such an effort. The system's reliability and resilience can be improved but never made perfect. Thus, system owners, operators, and regulators must prioritize their investments based on potential benefits. Enhancing the Resilience of the Nation's Electricity System focuses on identifying, developing, and implementing strategies to increase the power system's resilience in the face of events that can cause large-area, long-duration outages: blackouts that extend over multiple service areas and last several days or longer. Resilience is not just about lessening the likelihood that these outages will occur. It is also about limiting the scope and impact of outages when they do occur, restoring power rapidly afterwards, and learning from these experiences to better deal with events in the future.

Electric Power John C. Moorhouse 1986

Deregulation! Janice A. Beecher 2000

Understanding Electric Utilities and De-Regulation 2005 Power interruptions of the scale of the North American Blackout of 2003 are rare, but they still loom as a possibility. Will the aging infrastructure fail because deregulated monopolies have no financial incentives to upgrade? Is centralized planning becoming subordinate to market forces? "Understanding Electric Utilities and De-Regulation, Second Edition" provides an updated, non-technical description that sheds light on the nature of the industry and the issues involved in its transition away from a regulated environment. The book begins by broadly surveying the industry, from a regulated utility structure to the major concepts of de-regulation to the history of electricity, the technical aspects, and the business of power. Then, the authors delve into the technologies and functions on which the industry operates; the many ways that power is used; and the various means of power generation, including central generating

stations, renewable energy, and single-household size generators. The authors then devote considerable attention to the details of regulation and de-regulation. To conclude, one new chapter examines aging infrastructures and reliability of service, while another explores the causes of blackouts and how they can be prevented. Based on the authors' extensive experience, this edition offers an up-to-date perspective on the major issues impacting the daily operations as well as the long-term future of the electric utilities industry.

Markets, Pricing, and Deregulation of Utilities Michael A. Crew 2002-10-31 Markets, Pricing, and Deregulation of Utilities examines the effects of deregulation on the energy and telecommunications industries in an economic environment that has changed dramatically since deregulation was first introduced in those industries several years ago. The contributors to this book discuss the aspects of deregulation that appear to be succeeding and those that seem to be failing. Within that framework, they offer insight as to the possible next stages of regulatory restructuring and reform. The contents of this book provide a strong theoretical base leading to a better understanding of markets, pricing, and deregulation by utility managers, regulators, and economists.

Reflection on Discussions Concerning Regulation of the Electric Power Industry Kenji Takusagawa 1996

Deregulation of Electric Utilities 1981

Deregulation of Electric Utilities Georges Zaccour 2012-11-05 Deregulation of Electric Utilities reviews the main issues relating to the changing environment in the utility industry. Topics covered in depth include compensation for stranded costs, efficiency gains, institutional design, pricing, economics of scale, and network externalities. In addition, this book assesses early experiences in electricity deregulation in continental Europe, New Zealand, North America, and the United Kingdom.

Wired for Greed Joe Seeber 2005-10 Most Americans still do not understand electric utilities, and many consumers have only a vague grasp of the intricacies of regulation and deregulation. This is a paradox of sorts; regulation, in particular, seems easy enough to grasp. The real difficulty lies in understanding how power companies have manipulated the regulators. If you think utility deregulation has done away with electric utility monopolies, think again! Deregulation is a myth-it's business as usual for the power companies. For most of America, utility deregulation has yet to become a reality. Even if it does, electric companies will still swindle those they serve. Why? One reason: deregulation allows the utility giants to retain control of the transmission and distribution of electricity. Utility cheating has gone unchecked for more than a century. Author Joe Seeber has caught the electric companies red-handed, from fudged financials and courtroom trickery to meter manipulation and outright fraud. He paints a compelling portrait of an industry wired for greed-and argues that it's time someone pulled the plug.

Deregulation of the Energy Industry Elisabeth Pendley 1995

Seeing the Light David Morris 2001 The California energy crisis is not simply about a lack of electricity. It is about who owns the production and distribution of that electricity. As state after state agrees to deregulation, the utility industry is approaching a concentration not seen since the Power Trust of the 1930s. Seeing the Light urges us to change the rules now and create a future that includes affordable, locally owned electricity. The book chonicles hopeful new developments and reminds us that the best way to prevent another crisis is to build a better system. - Back cover.