

The book was found

# Utility Operations And Grid Systems Explained Simply

UTILITY OPERATIONS  
AND GRID SYSTEMS  
EXPLAINED SIMPLY



ENERGY TECHNOLOGIES  
EXPLAINED SIMPLY: VOLUME 10

MARK FENNELL



## Synopsis

Utilities and power grids may seem complex, yet this book will guide you easily through the mysteries. In this book you will learn the basic operations of utilities and the basic operations of grids. You will learn how power is traded in the power markets. You will learn how utilities and grids maintain quality control, including how they monitor the flow of power and how they make adjustments as needed. You will learn how power failures occur and how we can minimize power failures in the future. You will also learn a great deal about the future of power distribution, particularly in the areas of distributed generation and smart grids. No technical background is required; this book will explain everything you need to know about the operation of utilities and power grids in a way that any reader can understand. This book is designed for policy-makers, community activists, and curious citizens. This book is also designed as an essential reference for energy technology students and for anyone working in the electrical power industry.

### 10.1 Utility Company Operation Basics

The first chapter provides an overview of utility operation, focusing on quality control for utilities. This chapter discusses in detail how to ensure that there is enough power to meet demand at any given time.

### 10.2 Monitoring and Communications Systems

The second chapter discusses monitoring and communication systems. This chapter explains the SCADA system, including the components and operation. This chapter also explains the types of translation devices and the options for communication methods.

### 10.3 Quality Control for Utilities

causes, effects, and protection against significant variations for each factor.

### 10.4 Basic Concepts of Grids

Chapter four provides a broad perspective of grids, with further clarification by comparing grids to the highway system. You will learn the possible players in a grid and their roles. You will learn the jobs of the grid manager. A major section of this chapter is where you will learn the advantages and disadvantages of grids, followed by an overview of an ideal grid system.

### 10.5 Grid Operations

In chapter five we go step by step through the sequence of grid operations. By the end of this chapter you will understand the details of grid operation, including several common variations.

### 10.6 Quality Control for Grids

Chapter six discusses grid failures and quality control for grids. In this chapter you will learn how blackouts occur and how we can prevent them. The majority of chapter six provides detailed explanations of how to maintain quality control in any grid system, and thereby prevent power outages. You will learn about reliability oversight organizations such as NERC, FERC, and ERO. You will also learn the major sections of the Energy Policy Act of 2005 (most of which relate to reliability).

### 10.7 Smart Grids

Chapter seven discusses "Smart Grids". There are numerous technologies associated with the term "smart grid", therefore chapter seven begins with an overview of smart grids, followed by an overview of smart grid technologies. Much of this chapter is

devoted to the proper and improper uses of smart grid technologies.10.8 The Future of Electrical DistributionThe final chapter discusses the future of electrical distribution. This is a very important chapter because the paths we take when developing power distribution systems will affect our safety, reliability, and economic security for many years. Therefore, this chapter explains the visions for the future of electrical distribution, followed by detailed descriptions. This chapter also discusses some additional features which are valuable for the ideal future of electrical distribution.

## **Book Information**

File Size: 438 KB

Print Length: 124 pages

Page Numbers Source ISBN: 1479369772

Publication Date: February 10, 2014

Sold by:Â Digital Services LLC

Language: English

ASIN: B00IDAZI74

Text-to-Speech: Enabled

X-Ray: Not Enabled

Word Wise: Enabled

Lending: Not Enabled

Screen Reader: Supported

Enhanced Typesetting: Enabled

Best Sellers Rank: #298,098 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #45

inÂ Kindle Store > Kindle eBooks > Nonfiction > Science > Physics > Electromagnetism #126

inÂ Kindle Store > Kindle eBooks > Engineering & Transportation > Engineering > Electrical &

Electronics > Electricity Principles #152 inÂ Books > Science & Math > Physics >

Electromagnetism > Electricity

## **Customer Reviews**

Just Okay... Book has many grammatical errors and does lots of content repeating. It reads as if the author did lots of Wikipedia research then summarized. If you know nothing about the electrical industry, you may glean some understanding, yet there are several other books that will instill concepts and understanding. Save your money on this one...

I thought this was an interesting book. It was a little dull at some points, but I learned a lot about the

grid that I never even thought about.

Great start book for Introducing people to Grids--If you don't know why they exist you'll need one of my classes. Source recommend: Congressional Research Service--huge amount of information and free--you paid for it with your taxes.

This is my second book on power grids. I have gained a lot. I'm still missing some information such as what is being done to prevent the grid from going down. There are many ways the grid can be affected.

The author covered very negative subjects on the one energy source that could displace the Big Gorilla - fossil fuel, and that is nuclear power. I know the fossil fuel industry through people like the Koch brothers pay scientists and writers to put out negative information about nuclear power to insure they will never take over from fossil fuel, even though they are clean, smoke and soot-free and do not emit CO2. It would be good to hear the author come clean about whether his negatives views of nuclear were inspired by fossil fuel money.

[Download to continue reading...](#)

Utility Operations and Grid Systems Explained Simply Coal Power Technologies Explained Simply: Energy Technologies Explained Simply (Volume 6) Solar Power: The Ultimate Guide to Solar Power Energy and Lower Bills: (Off Grid Solar Power Systems, Home Solar Power System) (Living Off Grid, Wind And Solar Power Systems) Dot Grid Journal: A Dotted Notebook with Bullet Dots & Dot Grid Paper to Stay Organized / Dotted Grid to Bullet Journal Your Notes Dot Grid Notebook 8 Dots Per Inch: Dot Grid Composition Book Dotted 0.5 inches (approx 12.5 mm) Precise Dot-Grid Journal. Paper Size 7.50"W-9.75"H (Volume 5) Solar Farms: The Earthscan Expert Guide to Design and Construction of Utility-scale Photovoltaic Systems Solar PV Off-Grid Power: How to Build Solar PV Energy Systems for Stand Alone LED Lighting, Cameras, Electronics, Communication, and Remote Site Home Power Systems Dance Bullet Grid Journal: A Perfect Gift for Dancers and Teachers, 150 Dot Grid and Inspiration Pages, 8x10, Professionally Designed (Journals, Notebooks and Diaries) Shit to Do: Unicorn Dot Grid Journal, Over 150 Pages, 8" by 10" Notebook, Planner, and Sketch Book Diary for Bullet Grid Journaling, Calligraphy, and Hand Lettering Cute Piglet: Sketchbook for Kids : Dot Grid Journal : Notebook Composition:Girls: dot grid journal and sketchbook for boys and girls 8x10 inch,99 Pages Dot Grid Journal: Bullet Grid Journal, Floral, Over 150 Pages, 8" by 10" Notebook, Planner, and Sketch Book Diary for Journaling, Calligraphy, and Hand Lettering A

Teacher's Bullet Grid Journal: A Perfect Gift, 150 Dot Grid and Inspiration Pages, 8x10,  
Professionally Designed (Journals, Notebooks and Diaries) Dot Grid Paper Notebook: Watercolor  
Circles: 7.5 x 9.5 Dot Grid Journal, 170 Pages (Dot Notebooks) Bullet Blue Journal: Bullet Grid  
Journal Blue Polka Dots, Large (8 x 10), 150 Dotted Pages, Medium Spaced, Soft Cover (Vintage  
Dot Grid Journal Large) (Volume 6) Bullet Gold Journal: Bullet Grid Journal Gold Polka Dots, Large  
(8 x 10), 150 Dotted Pages, Medium Spaced, Soft Cover (Vintage Dot Grid Journal Large) (Volume  
11) Graffiti: 6x 9 Dot Grid Journal | Professionally Designed, Work Book, Planner, Dotted Notebook,  
Bullet Grid Journal, Diary, 100 Pages (Volume 7) Sketch Journal: Bullet Grid Journal, 8 x 10, 150  
Dot Grid Pages (sketchbook, journal, doodle) Travelers Doodle Notebook: Bullet Grid Journal, 8 x  
10, 150 Dot Grid Pages (sketchbook, journal, doodle) Big Bullet Grid Journal for Kids: Large Dot  
Grid Notebook for Children A4, 110 Dotted Pages, Wide Spaced, Soft Cover (Kids Dotted Journal)  
(Volume 1) Travelers Doodle Book: Bullet Grid Journal, 8 x 10, 150 Dot Grid Pages (sketchbook,  
journal, doodle)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)