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Smart Grid

Integrating Renewable, Distributed, and Efficient Energy

Edited By Fereidoon P. Sioshansi

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Fereidoon P. Sioshansi



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KEY FEATURES

- Provides critical information on the technological, design, and policy issues that must be taken into account to ensure that the smart grid is implemented successfully
- Demonstrates how smart grids can help utilities adhere to increased renewable portfolio standards
- Provides examples of successful microgrid/smart metering projects from around the world that can act as templates for developers, operators, and investors embarking upon similar projects

DESCRIPTION

This book covers Smart Grids from A to Z, providing a complete treatment of the topic, covering both policy and technology, explaining the most recent innovations supporting its development, and clarifying how the Smart Grid can support the integration of renewable energy resources. Among the most important topics included are smart metering, renewable energy storage, plug-in hybrids, flexible demand response, strategies for offsetting intermittency issues, micro-grids for off-grid communities, and specific in-depth coverage of wind and solar power integration. The content draws lessons from an international panel of contributors, whose diverse experiences implementing smart grids will help to provide templates for success.

If we intend to undertake a meaningful overhaul of the way the world uses energy resources, we ignore grid management issues at our peril. Ultimately, this important book examines what the integration challenges are, what technology and policy needs to be in place in order to support uptake, and what the Smart Grid can do to enable solutions.

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Guido Bartels, General Manager, Energy & Utilities, IBM and Chairman, Global Smart Grid Federation

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Fereidoon P. Sioshansi, Menlo Energy Economics