Placing emphasis on practical how-to guidance, this cutting-edge resource provides a first-hand, insider’s perspective on the advent and evolution of smart grids in the twenty-first century (Smart Grid 1.0). The Advanced Smart Grid: Edge Power Driving Sustainability uses the design and construction of the first citywide smart grid in the United States as a case study, sharing the many successes and lessons learned. Readers gain working knowledge of successful tools and best practices that are needed to overcome diverse technological and organizational challenges as they strive to build a next-generation smart grid (Smart Grid 2.0). Additionally, this unique book offers a glimpse at the future with interconnected advanced smart grids and a redesigned energy ecosystem (Smart Grid 3.0).

"... the visionary book on smart grids. It is the right book for these times. If you read only one book on the smart grid — you have already picked the right one." —William R. Moroney, President and Chief Executive Officer, Utilities Telecom Council, Washington, D.C.

"...a timely, comprehensive and insightful overview of the powerful potential that a truly advanced smart grid has.... Carvallo and Cooper deliver a must-read for anyone interested in the promise and capability of these fast-evolving networks." — Laura Chappelle, former Michigan Public Service Commission Chairman

"Carvallo and Cooper deliver a practical approach and candid opinions that bring clarity to the advancement of smart grid." — Gato Bartoli, Chairman, Global Smart Grid Federation, Former Chairman, Gridwise Alliance

Andres Carvallo is a board member of the Utilities Telecom Council’s Smart Networks Council and an energy and technology advisor to The University of Texas at Austin, The University of Kansas, and the University of California Los Angeles. He has over 25 years of experience in the energy, wireless, computer, and software industries as an executive, technologist, and operations expert. Mr. Carvallo received a B.S. in mechanical engineering from The University of Kansas with a concentration in robotics and control systems.

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Andres Carvallo • John Cooper

“... should be required reading for anyone attempting to get up to speed quickly with respect to the smart grid." — Rick Nitchiaon, Group Vice President, IDC Energy Insights

"... presents a compelling road map for anyone who wants to learn how they can participate in building this future." — Ferecator McCloud, Executive Director, Pecan Street Project

“Carvallo and Cooper show an enthusiasm and deep knowledge of emerging smart grids and future possibilities. They present challenges of distributed generation, dealing with the plethora of data, and balancing grid operation and consumer privacy. They use their extensive hands-on experiences in describing the building of a smart grid and in explaining techniques for readers.” — Dr. Gary J. Minden, Information and Telecommunications Technology Center, The University of Kansas

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