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Nota di contenuto	Introduction: Building the West Wide System Model (WSM) -- Real-Time Contingency Analysis with Inclusive RAS Models -- Implementing Real-time Voltage Stability Analysis Tool for Assessment of Interconnection Reliability Operating Limits (IROLS) -- Implementing Online Transient Stability Analysis Tool for System Frequency Response Monitoring Against Penetration of Renewable Generation -- Best Practice in DTS Operation Trainings: Blackstart Drills and Tool Training -- A Framework of Using Synchrophasor Measurements in Control Center and Implementation of Synchrophasor Applications -- Bridge the Gap Between Real-time EMS Models and Planning Models -- Conclusions.
Sommario/riassunto	This book examines real-time models and advanced online applications that enhance reliability and resilience of the grid in real-time and near real-time environments. It is written by Peak Reliability engineers who worked on the creation of the West Wide System Model (WSM) and the implementation of advanced real-time operation situational awareness tools for reliability coordination function. The book looks at how a single Reliability Coordinator for the Western Interconnection did its work under normal and emergency conditions, providing a unique perspective on best practices and lessons learned from Peak’s modeling and coordination efforts to create, maintain, and improve

state-of-art new technology and algorithms to improve real-time operation situational awareness and Bulk Electric System (BES) grid resilience. Coverage includes practical experience of implementing real-time Energy Management System (EMS) Network Application, real-time voltage stability analysis, online transient stability analysis, synchrophasor technology, Dispatcher Training Simulator and EMS Cybersecurity & Inter-Control Center Communications Protocol (ICCP) implementation experience in a Reliability Coordinator Control Room setting. Explains how to operate a “green” grid and prevent new blackouts against uncertain operation conditions; Written by Peak Reliability engineers who worked on the creation of the West Wide System Model (WWSM); All material verified in practical system operations, or validated by real system measures and system events.