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Titolo	TSO-DSO Interactions and Ancillary Services in Electricity Transmission and Distribution Networks [[electronic resource] ] : Modeling, Analysis and Case-Studies // edited by Gianluigi Migliavacca
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ISBN	3-030-29203-7
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (227 pages) : illustrations
Disciplina	621.319
Soggetti	Energy systems Power electronics Energy policy Energy and state Energy Systems Power Electronics, Electrical Machines and Networks Energy Policy, Economics and Management
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Introduction -- TSO-DSO interaction and acquisition of ancillary services from distribution -- Modeling of complex systems including transmission, distribution, aggregation, ancillary services markets -- Scenario analysis -- ICT requirements in a smart-grids environment -- Technologies and protocols: the experience of the three SmartNet pilots -- Regulatory analysis -- Conclusions. .
Sommario/riassunto	This book presents new and practical solutions to solve the coordination problem faced due to the increasing integration of renewable energy sources into existing electricity transmission networks it addresses how the subsequent technological revolution is not only affecting the structure of the electricity markets, but also the interactions between transmission system operators (TSO) and distribution system operators (DSO). A must-have for smart grid analysis, this book presents models and scenario buildups of complex systems and incorporates the experience of three technological pilots

that are analyzing special issues connected to network monitoring and control, and participation to a would-be ancillary services market from special subjects. The reader will benefit from the experience drawn from SmartNet, a major research project encompassing 22 partners from nine EU countries and including input gathered from a significant number of industrial partners. Includes case-studies and examples to illustrate the methods presented in the text Presents an analysis of ICT requirements Contains both technological and regulatory analysis of the TSO-DSO coordination problem.

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