

1. Record Nr.	UNINA9910557313203321
Autore	Bak-Jensen Birgitte
Titolo	Integration of Renewables in Power Systems by Multi-Energy System Interaction
Pubbl/distr/stampa	Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2021
Descrizione fisica	1 electronic resource (358 p.)
Soggetti	History of engineering & technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>This book focuses on the interaction between different energy vectors, that is, between electrical, thermal, gas, and transportation systems, with the purpose of optimizing the planning and operation of future energy systems. More and more renewable energy is integrated into the electrical system, and to optimize its usage and ensure that its full production can be hosted and utilized, the power system has to be controlled in a more flexible manner. In order not to overload the electrical distribution grids, the new large loads have to be controlled using demand response, perchance through a hierarchical control set-up where some controls are dependent on price signals from the spot and balancing markets. In addition, by performing local real-time control and coordination based on local voltage or system frequency measurements, the grid hosting limits are not violated.</p>