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Titolo	Fundamentals of ocean renewable energy : generating electricity from the sea // Simon P. Neill, M. Reza Hashemi
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Descrizione fisica	1 online resource (338 pages)
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Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Review of hydrodynamic theory -- Tidal energy -- Offshore wind -- Wave energy -- Other forms of ocean energy -- In situ and remote methods for resource characterization -- Ocean modelling for resource characterization -- Optimization -- Other aspects of ocean renewable energy.
Sommario/riassunto	Fundamentals of Ocean Renewable Energy: Generating Electricity from the Sea presents the basic concepts of mechanics and introduces the various technical aspects of ocean renewable energy. Contents follow a logical sequence, starting with hydrodynamics and then separately examining each conversion technology, with special focus on tidal energy, offshore wind and wave energy, as well as current and ocean thermal energy conversion (OTEC). The authors explore key topics for resource characterization and optimization, such as monitoring and measurement methods and ocean modeling. They also discuss the sustainability, planning, integration and distribution challenges for the implementation of these technologies, including co-location with other systems. Finally, case studies of ocean energy sites and devices allow for a better understanding of how ocean energy conversion works in real-world settings. This book is an invaluable resource for students at graduate and senior undergraduate level engineering (ocean, mechanical, and civil) and oceanography with prior knowledge of fluid

mechanics and mechanics of materials. Presents the fundamental physics and theory behind ocean energy systems, covering both oceanographic and engineering aspects of ocean energy. Explores the most widely adopted conversion technologies, including tidal, wave, offshore wind, ocean thermal and currents
