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Nota di contenuto	Intro -- Onshore and Offshore Wind Energy: An Introduction -- Contents -- Preface -- Acknowledgements -- 1: Introduction -- 1.1 Wind energy and Planet Earth -- 1.2 Winds of the world -- 1.3 From windmills to wind turbines -- 1.4 Power, energy and performance -- 1.5 Coming up to date -- References -- 2: Capturing the wind -- 2.1 Wind speed and power -- 2.2 Wild wind -- 2.2.1 Introductory -- 2.2.2 Wind statistics -- 2.2.3 Mapping and forecasting -- 2.3 Predicting turbine output -- References -- 3: Wind turbines -- 3.1 Turbine types and sizes -- 3.2 Aerodynamics -- 3.2.1 Rotor efficiency and the Betz Limit -- 3.2.2 Lift and drag -- 3.2.3 Rotor speed -- 3.2.4 Rotor blades -- 3.2.4.1 Choosing airfoils -- 3.2.4.2 Stall and pitch control -- 3.3 Mechanics -- 3.3.1 Gearboxes -- 3.3.2 Towers -- 3.3.3 Vibration and fatigue -- 3.4 Electrics -- 3.4.1 AC electricity -- 3.4.2 Generators --

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Sommario/riassunto

"This book uses academic content and rigor to introduce all relevant topics, from global wind resource and historical background, through to modern electricity generation and distribution, including the topical subject area of offshore systems"--

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