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1.8 Transmission and Distribution Systems 1.8.1 Representation; 1.8.2 Transmission; 1.8.3 Distribution Systems; 1.8.4 Typical Power Systems; 1.9 Utilization; 1.9.1 Loads; Problems; 2 Basic Concepts; 2.1 Three-Phase Systems; 2.1.1 Analysis of Simple Three-Phase Circuits; 2.2 Three-Phase Transformers; 2.2.1 Auto-transformers; 2.3 Active and Reactive Power; 2.4 The Per-Unit System; 2.4.1 Resistance and Impedance; 2.4.2 Three-Phase Circuits; 2.4.3 Transformers; 2.5 Power Transfer and Reactive Power; 2.5.1 Calculation of Sending and Received Voltages in Terms of Power and Reactive Power  
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3.6 Automatic Voltage Regulators (AVRs) 3.6.1 Automatic Voltage Regulators and Generator Characteristics; 3.7 Lines, Cables and Transformers; 3.7.1 Overhead Lines -Types and Parameters; 3.7.2 Representation of Lines; 3.7.3 Parameters of Underground Cables; 3.8 Transformers; 3.8.1 Phase Shifts in Three-Phase Transformers; 3.8.2 Three-Winding Transformers; 3.8.3 Auto-transformers; 3.8.4 Earthing (Grounding) Transformers; 3.8.5 Harmonics; 3.8.6 Tap-Changing Transformers; 3.8.7 Typical Parameters for Transformers; 3.9 Voltage Characteristics of Loads; 3.9.1 Lighting; 3.9.2 Heating  
3.9.3 Synchronous Motors

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#### Sommario/riassunto

The definitive textbook for Power Systems students, providing a grounding in essential power system theory while also focusing on practical power engineering applications. Electric Power Systems has been an essential book in power systems engineering for over thirty years. Bringing the content firmly up-to-date whilst still retaining the flavour of Weedy's extremely popular original, this Fifth Edition has been revised by experts Nick Jenkins, Janaka Ekanayake and Goran Strbac. This wide-ranging text still covers all of the fundamental power systems subjects but is now e

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