



## Power Systems Analysis (2nd Edition)

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Prentice Hall, 1999. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: 1. Background. Introduction. Electric Energy. Fossil-Fuel Plant. Nuclear Power Plant. Hydroelectric Power Plant. Other Energy Sources. Transmission and Distribution Systems. The Deregulated Electric Power Industry. 2. Basic Principles. Introduction. Phasor Representation. Complex Power Supplied to a One-Port. Conservation of Complex Power. Balanced Three-Phase. Per Phase Analysis. Balanced Three-Phase Power. Summary. 3. Transmission-Line Parameters. Introduction. Review of Magnetics. Flux Linkages of Infinite Straight Wire. Flux Linkages; Many-Conductor Case. Conductor Bundling. Transposition. Impedance of Three Phase lines Including Ground Return. Review of Electric Fields. Line Capacitance. Determination of Line Parameters Using Tables. Typical Parameter Values. Summary. 4. Transmission-Line Modeling. Introduction. Derivation of Terminal V, I Relations. Waves on Transmission Lines. Transmission Matrix. Lumped-Circuit Equivalent. Simplified Models. Complex Power Transmission (Short Line). Complex Power Transmission (Radial Line). Complex Power Transmission (Long or Medium Lines). Power-Handling Capability of Lines. Summary. 5. Transformer Modeling and the Per Unit System. Introduction. Single-Phase Transformer Model. Three-Phase Transformer Connections. Per Phase Analysis. Normal Systems. Per Unit Normalization. Per Unit Three-Phase Quantities. Change of Base. Per Unit Analysis of Normal System. Regulating Transformers for Voltage and Phase Angle Control. Autotransformers.

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