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## EXPERIMENT 2

### Power World Simulator; Three-Phase Power; Power Factor Correction

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**Objectives:**

Learn to use the PowerWorld Simulator software. Demonstrate understanding of 3-phase power, and use PowerWorld to solve related problems.

**Statement of the problem:**

Do Problem 2.32, Problem 2.33, and Problem 2.34 (of Glover/Sarma text) using Power World. These problems illustrate use of shunt capacitors to minimize losses.

Do Problem 2.27 and Problem 2.48. They require determining capacitance to improve power factor in three-phase systems. They also illustrate working with motor loads.

**Describe your solution to the problems assigned:** What problems did you encounter in using the Simulator?

**Result obtained:** Show your results. Include plots. Show a listing of any code that you had written yourself.

**Discussion of Results:** Write a discussion of the results you obtained.

1. Why is it that losses are minimized with capacitors placement?
2. How did you verify your results with respect to reasonableness and accuracy?