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# BEE4173: Power System Operation & Control

## Introduction

by

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# Chapter Description

- Expected Outcomes

*In this chapter, the overview of power system components and structure will be briefly explained.*



# Introduction

- Power systems are one of the largest and most complex engineering systems created by human. The systems are created in order to ensure the longevity and sustainability of the energy for civilization development.
- Energy is a fundamental ingredient of modern society and its supply impacts directly on the social and economic development of nations.
- When we talk about power system, it can be divided into three main structures: Power generation, transmission and distribution, and finally consumers.
- There are various issues when we focus on the specific structure. The issues of depletion of natural resources such as oil and natural gas, the introduction of smart grids into current system, power market and renewable energy integration and many more make power system very complex.
- Nevertheless, the abundant electricity supply with good quality is a must nowadays.

# Structure of the Power System

- Generation
- Transmission
  - subtransmission
- Distribution
- Load

# Structure of the Power System

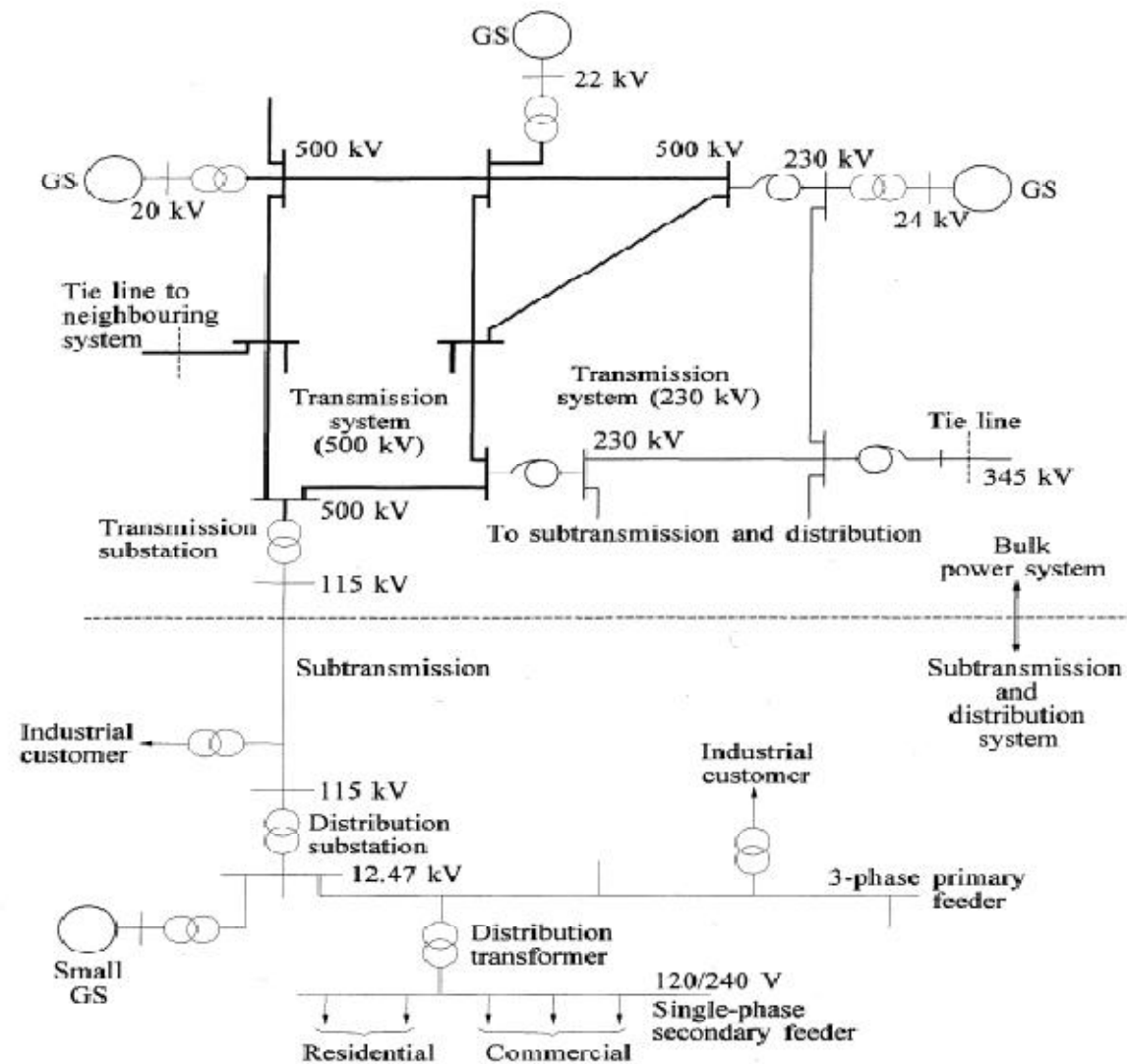


Figure 1.1: Example of elements in power system ([Kundur, 1997](#))

# Thank You