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| **Title** | 9th homework in the Electric Circuit Theory class by 201923250 |

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**Summarization for sections from 11.1 to 11.3**

The key focus of our study has to date been cal- culminating voltage and current in ac circuit research. Power analysis is our key focus in this chapter. The study of power is highly significant. Power is the key quantity in electrical systems , computer systems and communication systems, as power is transferred from one point to another in these systems.

Each household and industrial electronics equipment, like all fans, generators, lamps, iron presses, TVs and personal computers, has a power rating that shows how much power the equipment needs.

The most popular source of electricity is an acoustic power of 50 to 60 Hz. Ac over dc allowed for the transfer of high-voltage electricity from the power generating station to the customer.

Instantaneous power and average power are calculated and extracted. Then we add other principles of control. We will address how electricity is calculated and how electric utility providers bill their consumers as a practice implementation of these principles.

The load impedance Z shall be the complex conjugate of the Thevenin impedance ZTh for the overall average power transfer.

The average power, in watts, is the average of the instantaneous power over one period.

