

HIGHER TECHNICAL INSTITUTE

**ELECTRICAL ENGINEERING
COURSE**

DIPLOMA PROJECT

**VOLTAGE TRANSFORMATION
AND REGULATION**

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1. INTRODUCTION

The basic human need for safe, efficient and affordable electrical energy became the driving force, which led to the development of today's power systems and made voltage transformation and regulation a very important chapter for all countries supply system. Large electrical power systems are build up to connect generating plants to the consumer's loads by means of an interconnected system of transmission and distribution networks, to satisfy the every day demand.

Furthermore, utility is much more complicated than we may think, as utilities are obliged by law to control the voltage of supply system within specified limits. That's why elaboration of the factors that affect the level of voltage that "enters" the premises of consumers is important and there is a need for regulating the supply voltage.

Finally utilities have adopted some emergency steps for protecting the supply system and consumers from the effects of sustained overvoltages.

This project goes through and analyses all the factors that must be conceded in a real supply system.

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