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**ASSIGN
BUSTER**

We wish to express our profound thanks to all those who helped in making this report a reality. Much need moral support and encouragement is provided on numerous occasions by our whole friends, UPCL members and seniors We would also like to take the opportunity to acknowledge the contribution of all faculty members of the department for their kind assistance and cooperation during development of our project. SMITA DOBHAL – (07090105048) 1. 1 – Substation Secondary unit substation are essentially a repeat of configuration of the station auxiliary transformer and the medium voltage transformer but at a lower voltage.

Breakers one of the plant switchgear will feed a transformer (in the one-line diagram the feed breakers is the 2A-3 Breaker on the 2A 4160 voltage bus) that will reduce the voltage to 480 volts. This transformer is an integral part of a line up 480 volt Switchgear.

Sometimes Unit Substation are designed with a transformer at each end of the Switchgear. These are referred to as “ Double Ended” secondary unit substation. The configuration shown in the one line above is single ended substation tie breaker which provide essentially the same reliability as a double ended substation.

Secondary Unit Substation are used to feed the large component in a power plant by further distributing power to load centers, motor control centers, and battery charger. In addition, medium range motor 200 to 300 horse power are fed by individual 480 V SUS circuit breaker.

SUBSTATION 1. 2 – Power Station A power station (also referred to as a generating station, power plant, or powerhouse) is an industrial facility for

the generation of electric power. Power plant is also used to refer to the engine in ships, aircraft and other large vehicles.

Some prefer to use the term energy center because it more accurately describes what the plants do, which is the conversion of other forms of energy, like chemical energy, gravitational potential energy or heat energy into electrical energy.

At the center of nearly all power stations is a generator, a rotating machine that converts mechanical energy into electrical energy by creating relative motion between a magnetic field and a conductor. The energy source harnessed to turn the generator varies widely. It depends chiefly on which fuels are easily available and on the types of technology that the power company has access to. Chibro Power Station) (Khodri Power Station) 1. 2. 1
- Operation of Power Station The power station operator has several duties in the electrical generating facility.

Operators are responsible for the safety of the work crews that frequently do repairs on the mechanical and electrical equipment. They maintain the equipment with periodic inspections and log temperatures, pressures and other important information at regular intervals. Operators are responsible for starting and stopping the generators depending on need.

They are able to synchronize and adjust the voltage output of the added generation with the running electrical system without upsetting the system. They must know the electrical and mechanical systems in order to troubleshoot problems in the facility and add to the reliability of the facility.

Operators must be able to respond to an emergency and know the procedures in place to deal with it. 2. 1 – Transformer A transformer is a device that transfers electrical energy from one circuit to another through inductively coupled conductors—the transformer’s coils.