

1.2. Substation

1.2.7. Control Room

The substation room contains switchboard panels, supervisory control/SCADA equipment, power-line carrier, meters, and relays. The control room provides all weather protection and security for the control equipment.

1.2.8. Battery Room

Batteries are used in the substation control house as a backup to power the control systems in case of a power blackout. These batteries are stored in dedicated and ventilated Battery room.

1.2.9. Battery Charger Room

Battery charger rooms house the battery charging equipment and controls.

1.2.10. Shunt Reactor

Shunt Reactors are used in an extra high-voltage substation to neutralize inductive reactance in long EHV transmission lines .

1.2.11. Switchgear

Switchgear can be either for outdoor use or indoor use. An outdoor metal-clad switchgear is a weatherproof housing for circuit breakers, protective relays, meters, current transformers, potential transformers, bus conductors, and other equipment. An indoor switchgear must be protected from the environment and contains the same types of equipment as the outdoor type.

1.2.12. Cable Spread Area

Area populated with High voltage cables penetrating walls and floors, connecting the equipment, transformers, switchgear, control equipment and distribution network.

1.2.13. Transmission Bus

Transmission bus are steel structure arrays of switches used to route power into a substation.

1.2.14. Distribution Bus

Distribution bus are steel structure arrays of switches used to route power out of a substation.

1.2.15. Circuit Breakers

A circuit breaker is an automatically-operated electrical switch designed to protect high voltage electrical circuit from damage caused by overload or short circuit. Its basic function is to detect a fault condition and, by interrupting continuity, to immediately discontinue electrical flow. Unlike a fuse, which operates once and then has to be replaced, a circuit breaker can be reset (either manually or automatically) to resume normal operation.

1.2.16. Ring Main Unit Room (RMU)

A room housing Ring Main Units. RMU is a totally sealed, gas-insulated compact switchgear unit. The primary switching devices can be either switch disconnectors or fused switch disconnectors or circuit breakers. Different combinations of these primary switching devices within the unit are commonly used.