The change-over circuit breaker or isolator shall have 4 - Poles for 3 - Phase supply and 2 - Poles for 1 - Phase supply to ensure that the phases and neutral of the two systems remain separate and distinct.

The installation shall ensure that there will be no possibility of paralleling generator supply with DEWA supply under any circumstances or conditions.

Adequate mechanical and electrical interlock between the incomer circuit breakers or isolators of both generator and DEWA supplies shall be provided. The full details of the equipment, circuit and wiring diagrams, details of essential loads, etc. shall be submitted to DEWA for approval before commencement of the works.

Provision for connecting mobile generator for maintaining power supply under mains failure conditions, shall be provided in the MDB/LV panel with incomer rating 2500A/1600A. The circuit breaker must be 4- poles type with adequate mechanical and electrical interlock between the incomer circuit breakers of both mobile generator and DEWA supply.

The location of main Electrical room shall be near to the front entrance/approach road and sleeves are to be provided for intake generator cables. This provision is not mandatory for the main LV panel connected with standby generator in Auto/manual change over Mode.

4.7 ASSESSMENT OF CONNECTED LOAD AND MAXIMUM DEMAND

4.7.1 Lighting and small power circuits

All lighting and fan circuits shall generally be installed with maximum load per circuit within 2000 watts. The minimum size of the circuit wires/Earth continuity conductor (ECC) shall be 2.5sq.mm PVC CU with maximum circuit breaker protection 16Amps. A minimum of 100watts shall be considered for each normal lighting & fan point, if light fixtures are not selected at the design stage. Fluorescent lamps may be assessed as 1.8 times the lamp watts.

Wherever fittings with discharge light, compact fluorescent lamps or low volt lamps are installed, the circuit breaker rating, circuit conductor sizes and number of fittings may be suitably selected based on the actual load, including losses, for specific application. Prior approval from DEWA shall be obtained for every installation.

A radial final sub-circuit may be installed to serve a maximum of five 13 Amps, switched socket-outlets in rooms other than Kitchen and controlled by a 20 Amp., circuit breaker in the distribution board. A maximum of ten socket-outlets in rooms other than kitchen may be connected to a ring circuit, controlled by a 30 Amp. circuit breaker.