

## **MINISTRY OF PUBLIC UTILITIES**

# **GOVERNMENT ELECTRICAL INSPECTORATE DIVISION REQUIREMENTS FOR GENERATOR APPLICATION**

Documentation to be submitted for an Inspection of a Generator and Transfer Switch

1. Submission of a completed Application Form.
2. Submission of an approved License from the Minister of Public Utilities.
3. Submission of a single line diagramme showing the Generator, Transfer Switch, Breaker arrangements, Normal Power supply feeder, Generator Power supply feeder, Emergency Board supply feeder and other auxiliary Switches.
4. Category of the generator based upon the National Electric Code (NEC) 2011 Articles 700, 701 and 702.
5. Submission of the following Technical data on Generator and Transfer switch: -

### **GENERATOR**

- Manufacturer
- Rated Power in kW
- No. of Phases
- Supply Voltage
- Frequency
- Engine Serial No.
- Alternator Serial No.
- Feeder Cable
- Generator Set Circuit Breaker

### **TRANSFER SWITCH**

- Type
- Manufacturer
- No. of Phases
- Rated Current
- Voltage Rating
- Power Rating in KVA/MVA
- Serial No.
- No. of Poles

**Please Note:** On the day of the inspection, the generator is to be started and a load test conducted.

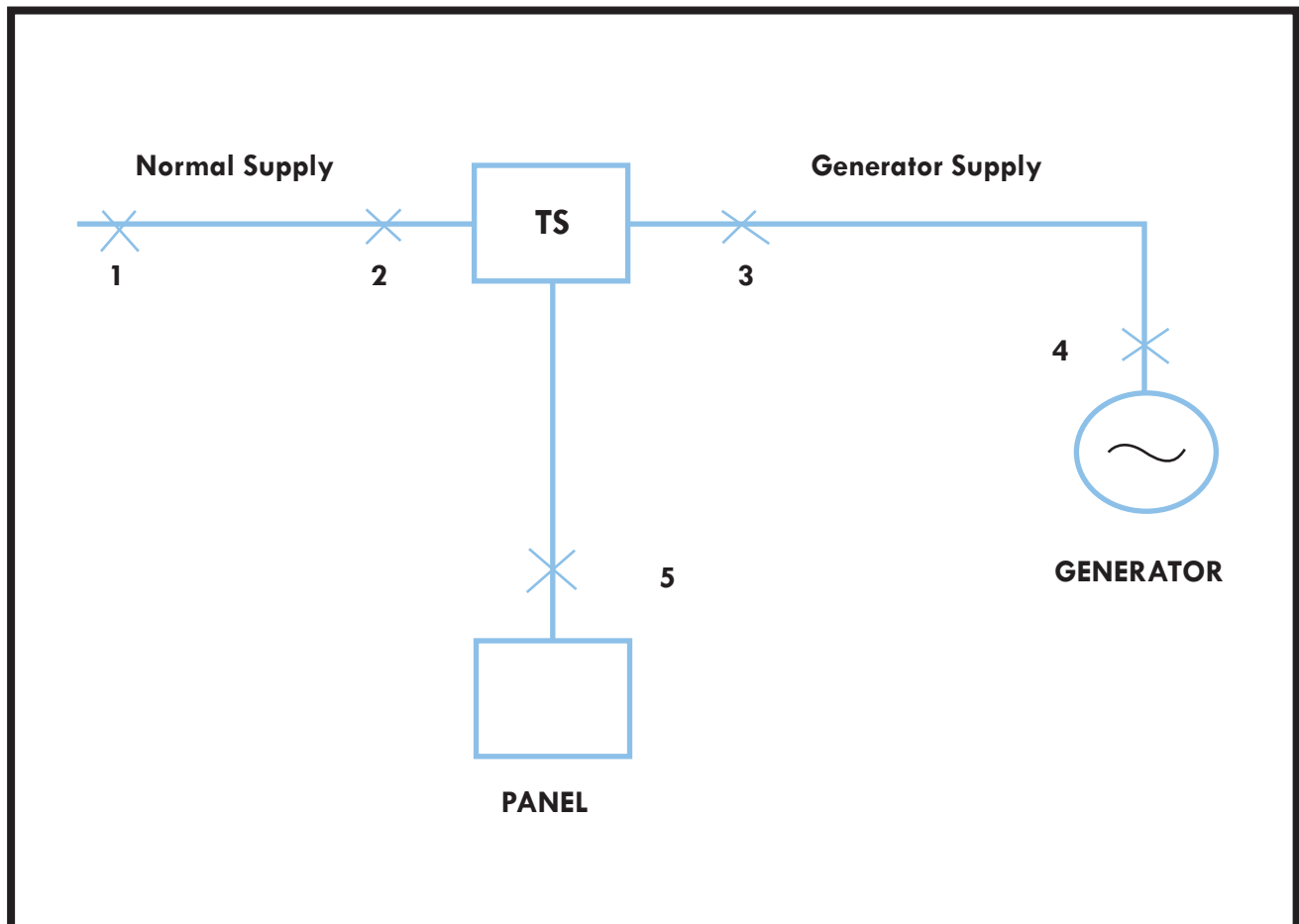
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## **REQUIREMENTS FOR GENERATOR INSTALLATION GENERATOR AND TRANSFER SWITCH MINIMUM REQUIREMENTS**

1. The Rated Power of the Generator shall be compatible with the connected load.
2. The Frequency, Phase Rotation and Generated Voltage shall be compatible to that of the Supply Authority.
3. The installation of the Generator Transfer and other Switches, shall comply with the National Electrical Code (NEC) Requirements at Table 110 (A) (1) (Working Spaces).
4. Equipment installed shall be in accordance with the requirements listing of Item 3.10 (Marking) TTS 171 Part 1.
5. A fire extinguisher is to be readily accessible from the generator's location.
6. The breaker arrangements shall comply with the drawing (GEI Breakers Arrangement).
7. The generator and transfer switch shall comply with the National Electric Code (NEC) 2011 Articles 700, 701 and 702.
8. For a three (3) pole transfer switch, if the neutral is bonded to the generator's earth terminal and/or generator chassis at the generator, no ground rod is to be driven. If the neutral is not bonded to the earth terminal or to the generator's chassis, a ground rod is to be driven with the generator earthed at this point and a ground conductor run linking this ground rod to the main earth ring.
9. For a four (4) pole transfer switch, a ground rod is to be driven and the neutral bonded to the generator's earth terminal. A ground conductor linking this ground rod to the main earth ring shall also be installed.

**NB:** Attached is a copy of the GEI Breakers Arrangement

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**GEI Breakers Arrangement**

- Legend:**
- TS – transfer switch
  - 1 – normal supply breaker
  - 2 – normal supply isolator within sight of TS
  - 3 – generator supply isolator within sight of TS
  - 4 – generator supply breaker
  - 5 – main switch for emergency/standby power panel

**NOTE:** *Either 2 or 3 may be excluded if:*

- a). The normal supply breaker or the generator breaker are of the lockable type; or
- b). The normal supply breaker or the generator breaker is within sight of TS