

CONNECTION OF GENERATORS TO ELECTRICAL INSTALLATIONS

The following precautions must be considered when connecting an electrical generator to existing electrical installation where normal electricity supply is unavailable – such as the result of bushfires.

- ✚ The connection of electricity supply, by generator, to installation wiring must be carried out by licenced electrical installation workers and is deemed to be 'Prescribed Electrical Installation Work'.
- ✚ A certificate of electrical safety for 'Prescribed Electrical Installation Work' must be issued.

AT THE EXISTING ELECTRICAL INSTALLATION

1. Conduct a visual inspection of the electrical installation.
 - (i) Check for connections to electrical installations such as fire damaged outbuilding, water pumps, garages.
 - (ii) Fallen overhead power-lines.
2. Unsafe parts of the electrical installation must be disconnected.
3. Carry out electrical tests of the installation to be connected to the generator.
4. Ensure no unsafe inter-connection is available between the Electricity Supplier and the installation electrical systems.
 - (i) Physically disconnect and safely terminate existing incoming supply conductors, where connected to the main switch/es and neutral link at the installation switchboard (including off-peak supply conductors)

CONNECTION OF GENERATOR SET TO EXISTING ELECTRICAL INSTALLATION

5. Ensure that the generator set is fit for the purpose
 - (i) in good working order.
 - (ii) of adequate capacity for the electrical load to be supplied (this may be limited to supply only essential equipment).
6. Position generator as close as practicable to the electrical switchboard.
 - (i) consideration must be given to exhaust emissions from the generator.
 - (ii) refer to the manufacture's operating instructions.
7. Cabling from the generator must be suitably protected against mechanical damage and as a possible tripping hazard.
8. Ensure,
 - (i) the generator active supply conductor/s is/are connected to the supply side of the installation main switch/es.
 - (ii) the generator neutral supply conductor is connected to the neutral link on the switchboard.
 - (iii) the men connection has been made.
 - (iv) all connections are suitably terminated and insulated where required.
 - (v) correct polarization of conductor by test.
9. At the generator,
 - (i) Do not install an earth electrode - it is not required.
 - (ii) Ensure that the electrical link/connection between the neutral or centre point of the generator set winding and generator metal frame is removed.
10. Ensure a separate earthing conductor is provided from the installation main earthing system to the generator set metal frame.

INSPECTION AND POWER-UP

11. The completed work must be inspected by a licenced electrical inspector (G class Inspector) before generator is operated.
Note: The S and R Class of electrical inspection have been incorporated into the G class of electrical inspection)
12. It is recommended that the electrical inspector, in conjunction with the licenced electrician, should ensure correct polarization of all supply conductors by conducting a live test.
13. Operating Instructions, on the safe use of the generator, should be provided to the owner of the installation.

FOR OTHER ARRANGEMENTS

14. Refer to AS/NZS 3010:2005 (Electrical Installations – Generating Sets)
-