
Electrical Distribution Safety

GENERAL:

The bulletin addresses “like-for-like replacement”, as defined in the Technical Guidelines, with respect to application in distribution substations. The following information may be particularly useful to parties involved in distribution substation maintenance practices.

GUIDELINE DEFINITION:

“like-for-like replacement” means the replacement of one piece of electrical equipment (one assembly) under all conditions, or a part or portion of a line under emergency conditions, on an existing distribution system that maintains as a minimum the characteristics and functionalities of the original installation;

GUIDELINE EXCERPT:

Section 7(7) of the *Regulation* states that the requirements of section 7 do not apply for work on *electrical installations* that involves the replacement of one piece of electrical equipment with another piece of *equipment* of the same voltage and characteristics. This section allows the *like-for-like replacement* of limited equipment on the *distribution system*. Examples where this exception may apply could be:

- the replacement of defective *equipment* with similar *equipment* (failed transformer, damaged switchgear, rotten pole);
- the replacement of substandard with standard single components (insulators, poles, cross arms, conductors);
- replacement of a single assembly such as a pole and the associated material;
- repair work on *legacy construction* subject to authorization by a *professional engineer*.

SUBSTATION APPLICATION OF LIKE-FOR-LIKE REPLACEMENT:

ESA allows for “like-for-like replacement” of limited equipment in a distribution substation. Examples where this exception may apply could be:

- for maintenance purposes any assembly or equipment within the substation.

Due to the secured nature of substation property, replacement of equipment under maintenance that maintains as a minimum the characteristics and functionalities of the original installation may be replaced using “like-for-like replacement”. There are no limitations as to the number of individual pieces of equipment, within a secured substation property, which may be replaced under non-capital work (like-for-like replacement).

Capital work, such as upgrades and new construction, is not considered to be “like-for-like replacement” and require plans or standard design drawings.

ADDITIONAL INFORMATION:

If you can provide additional information on this Bulletin or any other Utility issue, please contact ESA to share your experiences. Additional information requests, and follow-up information, may be directed to ESA. Please be prepared to quote Bulletin “DIB-05/10”.