

1. SCOPE

This section of the Energy Networks Live Working Manual (LWM) details the rubber gloves to be used by all **Persons** who are required to work or test on, or in close proximity to, **Live LV** conductors and for certain **Switching** and testing activities on the **Live HV System** (up to 33kV).

For **Company** employees it also describes the process for issue and replacement. This document deals with gloves which comply with IEC 60903 (2014) Class 1.

The specification for the use and testing of rubber gloves in connection with **HV** Rubber Glove Working is contained in OPSAF-13-001 (LWM 8.4) **HV** Rubber Glove Working techniques.

2. ISSUE RECORD

This is a Reference document. The current version is held on the EN Document Library

It is your responsibility to ensure you work to the current version.

Issue Date	Issue No.	Author	Amendment Details
Feb 2007 & September 08	5	Jack Neilson	Update to specification of insulated glove BS EN 60903 (2003) Removal of category (M) as this type of test is now incorporated into the standard manufacture and testing process. Re-branded Section 8.2 added requirement to mark date use commences on glove cuff.
Feb 2019	6	Dave Naylor	Title amended and scope expanded beyond SPEN issued gloves. Now aligns to IEC 60903 (2014) Arc protection qualities stated to align with SPEN specification. Inspection and cleaning advice updated. Process added for dealing with supply difficulties.

3. ISSUE AUTHORITY

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4. REVIEW

This is a **Reference** document which has a 5 year retention period after which a reminder will be issued to review and extend retention or archive.

DISTRIBUTION

This document is part of the Live Working Manual but does not have a maintained distribution list.

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6. DEFINITIONS

Terms printed in bold type are as defined in the Scottish Power Safety Rules (Electrical and Mechanical) 4th Edition.

7. POLICY

7.1 Class 1, 7.5kV insulated rubber gloves to the relevant IEC 60903 (2014) standard shall be issued to SP Energy Networks employees and its appointed contractors who are required to work or test on, or in close proximity to **Live LV** conductors. They are not meant to be the sole means of protecting those who work or test on **Live LV** conductors. These gloves shall also be issued to personnel who are required to operate air-break switch disconnecter handles, overhead **Apparatus** in substation outdoor compounds, link / fuse operating rods or to use moving-coil **Approved** voltage indicators on the **HV System**.

Class 1 gloves shall not be used for HV Rubber Glove Working on **Live HV** conductors.

Note: although Class 0 rubber gloves are rated for 1000V and would be appropriate for **Live LV** systems, experience has found them to be prone to damage when not used with gauntlets. Class 1 gloves are thicker and more suitable to be worn without gauntlets if required.

Class 0 gloves shall not be used by SP Energy Networks employees or its appointed contractors on the SP Energy Networks **System**.

7.2 The SP Energy Networks specification TSE-03-044 for rubber gloves requires a high level of electrical arc flash protection. It is strongly recommended that gloves provided by contractors provide an equivalent level of protection.

7.3 It is recommended that a leather protective outer gauntlet be used while operating on the **HV System** to prevent premature damage. Gauntlets shall be available for **Persons** with a preference to use them while working or testing on, or in close proximity to **Live LV** conductors.

Leather gauntlets also provide electrical arc protection which augments that provided by the rubber glove.

7.4 A protective wallet, to the relevant SP Energy Networks standard for the storage of rubber gloves shall be issued to all **Persons** issued with rubber gloves.

8. SP ENERGY NETWORKS GLOVE REPLACEMENT POLICY

This section describes the SP Energy Networks policy for replacement of damaged or time-expired gloves. Contractors shall implement their own policy which may complement or differ from the Energy Networks policy.

8.1 The rubber gloves shall be replaced before re-testing is required.

8.2 Class 1 7.5kV insulated rubber gloves shall be replaced twice per year, i.e. at 6 monthly intervals.

8.3 When the insulated gloves are first removed from the sealed bag in which they are delivered, the date of opening shall be written on each glove along the edge of the cuff using a ball-point pen or similar.

8.4 All rubber gloves shall be replaced in pairs.

8.5 The leather gauntlets and protective wallet need not be replaced at the time of replacement of rubber gloves, but only as required.

8.6 At the time of replacement, all gloves shall be destroyed by having the fingers cut off. Gloves which exceed 12 months from the manufacturer's test date shall be destroyed in the same manner.

8.7 Individual pairs of gloves may be issued at other times as required.

8.8 Insulated gloves issued must have the manufacturers test date stamped on each individual glove. Insulated gloves shall only be in use within 12 months of the test date. Gloves shall not be in use for more than a 6 month period.

8.9 Insulated gloves remaining in the store, which have not been issued and have been stored appropriately, can be issued for the remaining duration of the 12 month period from the manufacturers test date as long as it does not exceed 6 months of use.

9. ORDERING

The quantities of insulated gloves required shall be determined far enough in advance of the period of issue to permit an order to be placed and delivery taken immediately prior to the period of issue.

If supply chain difficulties prevent delivery of adequate supplies of replacement gloves, the Operational Assurance Manager (or nominee) may approve a temporary extension of use.

10. STORAGE

Insulated gloves shall be kept in store unfolded in the containers in which they are delivered. They shall be kept in dry conditions, away from strong light.

11. SAFETY REQUIREMENTS IN USE

11.1 When issued, but not in use, gloves shall be kept in the protective wallet, which shall be used only for storing the gloves. The wallet shall be kept away from moisture, strong light, and the risk of mechanical or chemical interference.

11.2 On each occasion before use, insulated gloves shall be examined by the user to ensure that they are safe for use. The examination shall include the following:

1.	Check that the manufacturer's test date on the gloves is not more than 12 months old.
2.	Check that gloves have not been in use for more than 6 months.
3.	Check that gloves are clean and dry, both outside and in.
4.	Check that the rubber does not show blisters or abrasions.
5.	Stretch the gloves by hand and check for tears, cuts and punctures.
6.	Complete an air test to confirm no punctures.
7.	Replace immediately, if either of a pair of gloves shows signs of not being safe. Both gloves shall be replaced.

11.3 If, as a result of the examination, either or both of the gloves is found to be unsafe, then the pair shall not be used.

12. PRECAUTIONS IN USE

12.1 Insulated gloves shall not be allowed to remain soiled or unnecessarily exposed to heat or light or allowed to come into prolonged contact with oil, grease, turpentine, motor spirit or strong acid. Gloves shall be wiped clean on completion of work to remove any surface contamination.

12.2 When insulated gloves become heavily soiled, they should be thoroughly washed with soap and water then dried. If insulating compound such as tar or paint still adhere to gloves, then those parts affected should be cleaned with degreasant and then immediately washed and treated as described above. Petrol, paraffin, or white spirit shall not be used to remove such compounds. Rinse the gloves with clean water after washing.

12.3 Any insulated glove, which becomes wet in use or through washing shall be thoroughly dried. Where heated air is blown into the glove, it shall not cause the temperature of the glove to exceed 55°C.