Electricity Distribution

nationalgrid

Company Directive

POLICY DOCUMENT: OH6/4

Construction, Maintenance and Replacement of Low Voltage Overhead Services

Author: **Mike Chapman**

Implementation Date: **January 2024**

Approved by

Carl Ketley-Lowe
Head of Policy Engineering

Date: **3rd January 2024**

Target Staff Group	**All staff involved with carrying out OH service work.**
Impact of Change	**Green - no impact on current working practices. This POL has been reviewed rebranded and re-formatted only.**
Planned Assurance checks	**To be completed during OH line Inspections and periodic Policy Compliance Checks.**

Introduction

This Policy Document provides guidance on the Construction, Maintenance and Replacement of Low Voltage Overhead Services.

Main Changes

Rebranding

Impact of Changes

None

Implementation Actions

None

Implementation Timetable

Can be used with immediate effect as no changes made.

REVISION HISTORY

Document Revision & Review Table		
Date	**Comments**	**Author**
January 2024	• Document Review – Rebranding & reformatting	Mike Chapman
February 2021	• Document review – Only formatting changes made and “relating to” removed from title and appendix C – Impact on Policy And Appendix D – Implementation of Policy removed as these are now covered in the Implementation Plan subsequent Appendices re-sequenced.	Mike Chapman
February 2018	• Document reviewed – No changes made	Paul Jewell / Mike Chapman
February 2015	• Title changed to include Maintenance. • Introduction of contents page. • Introduction of Clause 2.3 to carry out an assessment of the route the service is to take. • Clause 3.2 amended to clarify that Hybrid Concentric cable should no longer be used for service aerials and to place further limits on the use of ABC lead-ins.	Mike Chapman

Contents

1.0 INTRODUCTION

1.1 This document sets out the policy for new construction and replacement of low voltage overhead services.

2.0 DESIGN STANDARDS

2.1 Services shall be designed to the deterministic design loadings within ST: OH6A.

2.2 Services shall be designed and erected, so that as far as practical the occupier may maintain buildings in safety without the need for the erection of temporary shrouding.

2.3 Where it is necessary to replace an existing or install a new service an assessment of the intended route shall be carried out to ensure that any safety related issues are mitigated.

For example services should not be installed in cavities, encased in rendering or run for excessive lengths inside properties i.e. more than 2m; aerials shall be positioned such that anchor point is capable of holding the loading now and will not be undermined in the future.

2.4 Copper concentric cable is to be used as the standard cable for the construction or replacement of overhead services.

2.5 Split copper cable conductor shall be used where an existing service to be replaced is connected to a Separate Neutral Earth system. In practice this will only be necessary at some single customer substations and LV distribution systems strung with a separate aerial earth wire.

3.0 CONDUCTORS

3.1 The Electricity Safety Quality and Continuity Regulations require that any phase conductor within 3m of a building must be effectively insulated and that all services shall be positioned such that they are unlikely to be damaged.

3.2 Construction of services in order of preference shall be:-

- Continuous copper concentric cable from the overhead main to the cut-out.
- Copper Concentric aerial and lead-ins, with the joint as near to the service bracket as is reasonably practical.
- Copper Concentric aerial and PVC/PVC conductor lead-ins, with the joint as near to the service bracket as is reasonably practical.

- Effectively insulated ABC aerial and either Concentric or PVC/PVC lead-ins can be used but must be in line with clause 3.4 & 3.5 below.

- Effectively insulated open wire aerial and either Concentric or PVC/PVC lead-ins can be used, but its use must be in line with clause 3.3 below, the joint must be positioned as near to the service bracket as is reasonably practical.

- Due to the difficulties of applying additional protection in accessible areas and the aesthetics once fitted, effectively insulated ABC lead-ins shall only be used once all other options have been exhausted.

Where a join in the conductor is required it shall be made using an approved insulated jointing system.

3.3 Effectively insulated open wire spans shall only be used where:-

- The span length exceeds that of the maximum permissible for copper concentric cable.

- The span length exceeds that of the maximum permissible for effectively insulated ABC aerials.

- An alternative means of providing a service is not reasonably practical on the grounds of physical constraints of the property, environment, cost or disruption.

3.4 ABC may be used where the load requirement for the aerial conductor exceeds the rating of concentric cable.

3.5 Where ABC is to be used it shall terminated with an approved ABC termination bracket and connected into an ABC Distribution box or other approved joint as close to the service bracket as practical in order to pick up the service lead-ins.

APPENDIX A

SUPERSEDED DOCUMENTATION

This document supersedes POL: OH6/3 dated February 2021 which has now been withdrawn.

APPENDIX B

RECORD OF COMMENT DURING CONSULTATION

No comments received.

APPENDIX C

ASSOCIATED DOCUMENTATION

ST: OH6A

APPENDIX D

KEY WORDS

Services