

Modification proposal:	Distribution Code DCode004: Modification to the Distribution Code for the revision of Technical Specification 41-24 (Substation Earthing)		
Decision:	The Authority directs that this proposal be made ¹		
Target audience:	Parties to the Distribution Code and other interested parties		
Date of publication:	27 January 2010	Implementation Date:	1 February 2010

Background to the change proposal

Electricity Distribution Licence holders² are obliged under Standard Licence Condition 21 (SLC 21) to take all steps within their power to ensure that the Distribution Code in force under the licence at 31 May 2008 remains a code approved by the Authority³ that complies with the requirements set out in the licence. SLC 21.10 provides that revisions to the Distribution Code that are proposed by the licensee and sent to the Authority must not be implemented without the Authority's approval. After completing a review, the licensee must send to the Authority a report on the outcome of the review, a statement of any proposed revisions to the Distribution Code that the licensee reasonably thinks are appropriate for the continuing achievement of the objectives⁴ and any written representations or objections from licensees that were received during the consultation process that have not been withdrawn. The Energy Networks Association's (ENA) Technical Standard 41-24 (TS 41 – 24) provides guidelines for the design, installation, testing and maintenance of main earthing systems in substations. It is referenced in Annex 1 of the Distribution Code⁵. An Annex 1 Standard is defined as an "electricity industry national standard that implements Distribution Code requirements and which is listed in Annex 1 of the Distribution Code, and forms part of the Distribution Code". It is therefore recognised as a part of the Code and any change to TS 41-24 requires the approval of the Authority.

The provision for governance arrangements for Technical Standards is set out in section 7 of the Code⁶ which provides that the Annex 1 Standards is subject to the governance of the Panel - which will consult publicly on them and that ownership of the standards rests with the DNOs. The detailed governance arrangements are contained in the Constitution and Rules of the Distribution Code Review Panel of Great Britain⁷. For Annex 1 Standards, the DNOs report to the Authority who takes the final executive decision as to whether or not the proposed standard or modification should be implemented. Where there is unanimity within the Panel, the Authority will be asked to approve the modification to the Annex 1 Standard and any associated modification to the Distribution Code.

The proposed modification to TS 41 – 24 was initiated following a fatality several years ago where the earthing arrangements at the base of a high voltage overhead line pole were suspected of being a contributory factor. Work was initiated to develop guidance on the design, installation and testing of earthing systems to be used with various types of

¹This decision document includes the reasons for this decision as required by section 49A of the Electricity Act 1989.

² This includes the fourteen ex-PES licensees referred to as DNOs and all other licence holders referred to as IDNOs.

³ The terms 'the Authority', 'Ofgem' and 'we' are used interchangeably in this document. The Authority is the Gas and Electricity Markets Authority; the regulator of the gas and electricity industries in GB. Ofgem is the Office of the Gas and Electricity Markets which supports the Authority.

⁴ The objectives are set out in SLC 21.2 – 21.4, particularly 21.4.

⁵ See item 12 at Annex 1 page 21 of the Distribution Code at the following link:

<http://www.energynetworks.org/dcode/pdfs/Distribution%20Code%20Issue%2011.pdf>

⁶ See section 7.2 page 166 of the Code – see link at footnote 4.

⁷ The Rules can be viewed at the following link:

<http://www.energynetworks.org/dcode/pdfs/GBDCRP%20Constitution%20and%20Standard%20Procedures%20October%202009.pdf>

pole mounted high voltage (HV) equipment. This work was carried out by a working group drawn from the DNOs and culminated in the production of an additional section (Section 15) to be added to TS 41-24. This has been reviewed by all DNOs.

The Distribution Code Review Panel ("DCRP") carried out a public consultation on this issue in December 2008 (the consultation closed on 16 January 2009). Five comments were received which were discussed by the working group and the DCRP. These are discussed below.

Following this period of consultation and further consideration by the DCRP, the Chair of the DCRP wrote to us on 18 December 2009, on behalf of the Electricity Distribution Licence holders, who unanimously approved the proposed modification, seeking approval from the Authority to modify the Annex 1 TS 41 -24 standard of the Distribution Code.

The modification proposal

As described above, the proposed modification to the Distribution Code seeks to modify Annex 1 to reference the updated version of TS 41-24. The change to TS 41-24 is the addition of a new Section 15 – "EARTHING ASSOCIATED WITH HV DISTRIBUTION OVERHEAD LINE NETWORKS (EXCLUDING TOWER LINES & POLE TRANSFORMERS)". This new section has been developed as a result of a fatality where earthing arrangements were suspected of being a contributory factor.

DCRP Panel recommendation

The DCRP considered this modification proposal at its meeting on 1 October 2009 and agreed to seek our approval to replace TS 41-24 with the revised version including the new Section 15. Subsequently, the report to the Authority from the Chair of the DCRP recommends approval.

The changes proposed by the DNOs are set out in the Report to the Authority by the Chair of the DCRP as required by SLC 21.9 of the Electricity Distribution Licence.

The report to the Authority highlights the fact that comments were made suggesting changes to the proposals as a result of the final DCRP consultation. These comments related to:

- a) The mechanical protection of earth conductors above ground level; and
- b) The depth at which grading conductors should be buried.

The working group considered these comments but decided that they should not be included. We have been advised by the Chair of the DCRP that the main reason for this position was that the particular version of the document (i.e. as issued for consultation) had already been accepted by all ENA member companies, including the DNO making the comments, to ensure that all DNOs were aligned. However, it was considered that, having already achieved previous agreement from ENA member companies, it was important to get the document published because it had already suffered considerable delays in agreeing a final version.

The Authority's decision

SLC 21.10 of the Electricity Distribution Licence requires that modifications to the Distribution Code that are proposed by the licensees and sent to the Authority cannot be implemented without the Authority's approval.

The Authority has considered the Report to the Authority dated 18 December 2009 and the comments received during the consultation process. The Authority has concluded that:

1. implementation of the modification proposal will better facilitate compliance with the obligations set out in SLC 21 of the Electricity Distribution Licence; and
2. the modification made is consistent with the Authority's principal objective and statutory duties⁸.

Reasons for the Authority's decision

We understand that a very serious incident, involving a fatality, caused the DNOs to jointly produce guidance on specific issues (including safety) relating to earthing associated with HV distribution overhead line networks. This has resulted in the production of a new section that is proposed to be added to TS 41-24.

We consider it entirely appropriate that such guidance should be made available to all electricity distribution licensees. We understand that the guidance has been produced by recognised experts in this field and that the Health and Safety Executive has been consulted on the guidance and offered no comments on its contents.

We have had regard to the comments received as a result of the DCRP consultation (as described above). We accept that the DCRP has given them due consideration, and we accept that it is preferable to ensure that documents of this type accurately reflect all parties' requirements. However, we are concerned by the length of time taken to agree the guidance given the history to this matter, and in all the circumstances, we agree that the guidance should be published. We also note that there are a number of ongoing updating initiatives underway including a further review of the whole of TS 41-24, and in this context we would ask the Panel to urgently consider the materiality of the comments that have not been taken on board at this time, and if appropriate to raise the necessary modification as soon as possible.

Notwithstanding the ongoing review, which may prompt further revisions to TS 41-24, we consider that the implementation of the guidance at this time will better facilitate the objectives of the Distribution Code, in particular the Distribution Code requirement set out in SLC 21.4 (a):

permit the development, maintenance, and operation of an efficient, co-ordinated, and economical system for the distribution of electricity

It is essential that earthing systems are properly designed, installed and maintained to ensure the safety of people at all times and the effective operation of protection systems. Further, the guidance will facilitate a consistent approach to earthing systems by distribution licensees. Therefore the Authority considers that the addition of Section 15 to TS 41-24 will assist licensees in the design, installation and maintenance of specific earthing systems and that this is consistent with this Distribution Code requirement.

More generally, we would ask the Panel to ensure that future reports on proposed modifications also deal with the manner in which the modification better facilitates the objectives of the Distribution Code. Where appropriate (e.g. Annex 1 Standards), the report ought also to demonstrate the integrity of the modification that the Authority is

⁸ The Authority's statutory duties are wider than matters which the Panel must take into consideration and are largely provided for in statute, principally the Electricity Act 1989, the Gas Act 1986, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002 and the Energy Act 2004, as well as arising from directly effective European Community legislation.

being asked to approve. We note that this issue was raised by Ofgem's representative at the DCRP meeting of 1 October 2009 prior to the current report being submitted to the Authority, but given the brevity of the report, seems to have been taken on board to a limited extent.

Decision notice

In accordance with SLC 21.11 of the Electricity Distribution Licence, the Authority, hereby directs that modification proposal: Changes to the Distribution Code for the revision of Technical Specification 41-24 (Substation Earthing) be made.

Rachel Fletcher

Partner, Distribution

Signed on behalf of the Authority and authorised for that purpose.