Advisory Committee on Safety and Health at Work

Opinion

Doc. 2019/14-EN

Non-binding practical guide with a view to facilitate the implementation of the Directive 2013/35/EU on the minimum health and safety requirements regarding exposure of workers to the risks arising from electromagnetic fields (EMF).

Adopted on 27/11/2014
1. Introduction

Mandate of the Working Party Electromagnetic Fields (WP EMF)

The Advisory Committee on Safety and Health at Work has set up a Working Party, by adopting its mandate on 28/11/2013, to monitor the preparation of a non-binding guide to good practice for implementation of Directive 2013/35/EU on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (electromagnetic fields).

The remit of this working party is:

- To assist the Commission in the preparation of a guide to good practice for establishing the most appropriate conditions to ensure and maintain effective and sufficient conditions of protection for workers exposed to electromagnetic fields, in accordance with Directive 2013/35/EU on electromagnetic fields. This work will involve monitoring the preparation of the guide by the contractor selected by the Commission.

- To submit a draft opinion for adoption to the plenary of the Advisory Committee on the final guide.

Experts may be invited to provide inputs, where appropriate.

Justification

Article 14 of Directive 2013/35/EU provides for the Commission to make available non-binding practical guides at the latest six months before 1 July 2016, in order to facilitate the implementation of the Directive 2013/35/EU. When producing these guides the Commission shall work in close cooperation with the Advisory Committee on Safety and Health at Work.

Those practical guides shall, in particular relate to the following issues:

(a) the determination of exposure, taking into account appropriate European or international standards, including:
   — calculation methods for the assessment of the exposure limit values (ELVs),
   — spatial averaging of external electric and magnetic fields,
   — guidance for dealing with measurements and calculations uncertainties;
(b) guidance on demonstrating compliance in special types of non-uniform exposure in specific situations, based on well-established dosimetry;
(c) the description of the ‘weighted peak method’ for the low frequency fields and of the ‘multifrequency fields summation’ for high frequency fields;
(d) the conduct of the risk assessment and, wherever possible, the provision of simplified techniques, taking into account in particular the needs of SMEs;
(e) measures aimed at avoiding or reducing risks, including specific prevention measures
depending on the level of exposure and the workplace characteristics;

(f) the establishment of documented working procedures, as well as specific information and training measures for workers exposed to electromagnetic fields during MRI-related activities falling under Article 10(1)(a);

(g) the evaluation of exposures in the frequency range from 100 kHz to 10 MHz, where both thermal and non-thermal effects are to be considered;

(h) the guidance on medical examinations and health surveillance to be provided by the employer.

Composition of the WP EMF

Government
Jolanta KARPOWICZ/PL (rapporteur)
Hannelore NEUSCHULZ/DE
Clare McNICHOLAS/UK
Paul SCHUURMANN/NL

Employers
Ralf BODEMANN/DE
Gary BOOTON/UK
Jean Pol DEBELLE (BE) / replaced by David RENEW (UK)
Franck GAMBELLI/FR (chair)

Workers
Marc SAPIR/BE
Martins PUZULS/LV
Kari HARINGULS/LV
Helder PIRES/PT

Meetings
The WP EMF held a total of five meetings. The WP EMF has reached an agreement on a draft opinion on the “Non-binding practical guide with a view to facilitate the implementation of the Directive 2013/35/EU on the minimum health and safety requirements regarding exposure of workers to the risks arising from EMF” and is presenting it to the plenary meeting of the Advisory Committee on Safety and Health at Work for discussion and adoption.

2. Opinion

General remarks on the guide and its publication
The WP EMF wants to underline the specificity of this guide regarding the other guides published by the Commission. This is the first time that the European Parliament and the Council ask the Commission to provide such a detailed guide. The context of the revision of the 2004/40/EC Directive on EMF and the difficulties of negotiations of the 2013/35/EU Directive explains the choice to transfer a lot of technical issues to the non-binding guide. Knowledge of the EMF risks, regarding safety and health at work is not as
“mature” as those of other physical agents like noise, vibration and ionising radiation. The guide intends to fulfil the requirement of the Council and European Parliament as set in Article 14 of Directive 2013/35/EU. It gives a global overview of the issue. Some parts of the guide are more detailed, especially those dealing with new technical questions like the “weighted peak method”. The WP EMF considers that this part of the guide remains technically complex and will probably need to be completed or validated concerning some aspects when new information becomes available. Retrospectively, the WP EMF considers that it would have given another advice on the tender if it would have been conscious of the time needed to reach consensus and validation for these new aspects.

Some generic concepts used in the Directive 2013/35/EU like the ambiguous concept of “temporally” remains unspecified in the guide. It can only be at national level, where regulation, recommendations, agreements between employers and workers, sectorial good practices could give appropriate and concrete content to this kind of concept.

The WP EMF wants to highlight the major efforts deployed by the contractor and all participants to finalise the guide.

The WP EMF tried to reconcile the aim to fulfil the mandatory requirement of the Directive 2013/35/EU to detail eight issues (Article 14) with the aim to help employers, in particular small and medium-sized enterprises (SMEs), and also workers, worker representatives and regulatory authorities in Member States.

The Directive 2013/35/EU requests the guide to cover some complex scientific and technical issues which are long, detailed and impossible to understand by most of employers and workers.

The WP EMF suggests the Commission not publish the guide in one volume. The WP EMF suggests that the case studies could be published separately as volume II. The case studies should be checked and possibly complemented by other case studies. One exemplar case study could be extracted and included in a volume I.

WP EMF members considered several options on how to present the guide in two volumes:

- volume I contains the body of the text and appendixes, except appendix G (case studies), which is published as volume II;
- volume I includes the body of the text and Appendix A to D, volume II – the rest;
- volume I includes the body text of the guide, appendix F on MRI, annex H to M (informative appendixes on other texts, standards etc.), volume II – the rest;
- appendix D is a separate publication because the scientific level of the text concerns only experts.

Some WP EMF members consider that some parts of appendix D could be summarized.

The WP EMF considers that the guide needs proof reading:

- to check editorial aspects;
- to create a multi-language glossary to help the reader and translator;
- to examine the new version of appendix D completed by the German method.

This editing could be made by voluntary experts of the WP EMF.
The WP did suggest that as well as a hard-copy publication the guide should be available in a web based publication. The guide has been developed in a modular format, which is ideal for a web-based publication. It would enable SME’s to access only that information that is relevant to them in an easy to understand format.

Structure of the guide

The guide will assist employers to carry out an initial assessment of the risks from EMF in the workplace. Based on the outcome of this assessment, it will help to decide whether there is a need to take any further action as a result of the Directive 2013/35/EU. If there is, it will provide practical advice on measures that can be taken. A brief summary, one-page presentation of the key points as well as power point presentation of the key points accompany the draft guide. These materials are foreseen to improve awareness on and dissemination of this guide.

The guide is designed to help in understanding how the work carried out may be affected by the EMF Directive. It is not legally binding and does not provide an interpretation of specific legal requirements that one may have to comply with. It should therefore be read in conjunction with the EMF Directive, the Framework Directive (89/391/EEC) and relevant national legislation which may be more stringent.

The EMF Directive lays down the minimum safety requirements regarding the exposure of workers to risks arising from electromagnetic fields. However, few employers will need to calculate or measure the levels of EMF in their workplace. In most cases the nature of the work carried out is such that risks will be low and this can be established fairly simply. The structure of the guide is designed so that employers who are already compliant will be able to establish that quickly and without having to read the entire guide.

The guide naturally falls into four sections:

1. The first section (Chapters 1 to 3) is aimed at all readers and provides a general introduction, instructions on how to use the guide, an outline of the main safety and health effects and an explanation of sources of EMF. Importantly, Chapter 3 includes a list of generic equipment, activities and situations where the EMFs are expected to be so weak that employers will not need to take any further action. For most employers, provided they are already complying with the requirements of the Framework Directive, this list should enable them to decide that they have already met their obligations. For these employers the guide will have served its purpose and they need go no further.

2. The second section (Chapters 4 and 5) is aimed at those employers who have not been able to conclude that they have nothing more to do. These employers will need a better understanding of the requirements of the EMF Directive and will need to carry out a specific EMF risk assessment. For some this will be because they employ workers who are at particular risk from EMF. Depending on the outcome of the assessment, these employers may be referred directly to the fourth section (preventive measures). For other employers the EMF may be strong enough to present risks to all workers. These employers will also need to consider the third section.
3. The third section (Chapters 6, 7, and 8) is aimed at employers who need to establish whether action levels (ALs), and in some cases exposure limit values (ELVs), will be exceeded. Often it will be possible to demonstrate that this is not the case and existing work practices are acceptable. However, these employers will still need a more detailed risk assessment and a better estimate of exposures. For many it will be sufficient to read as far as Chapter 7, but some employers may also find it helpful to read Chapter 8.

4. The fourth section (Chapters 9, 10 and 11) is aimed at the small minority of employers who identify exposures above an ELV or other risks that need to be reduced. These employers will need to implement changes to protect workers. These employers should already have read earlier chapters of the guide.

5. The fifth section (Appendix A to M) develops technical aspects of the precedent sections. Said before, case studies could be published in another publication and all the others or some of the others with the precedent sections.

Caution

The suggestions and recommendations in this non-binding guide are based on the experience of experts in the EU Member States. Some parts of the guide (annex D) are exploratory. Some examples are based on the use of specific measuring instruments or software. The results are only examples and can’t, in any case, be extrapolated to other real situations even if the example is relevant and suggestive to the reader.

However, since every workplace and every task is unique, these suggestions and recommendations in no case absolve users of the non-binding guide from the obligation to undertake a thorough risk assessment before opting for the most suitable method, work equipment or other solution. Users must also obtain details of the laws, regulations, standards, interpretations, agreements applicable in their Member State.

Conclusion

- in view of the above, the WP EMF considers it appropriate to submit this “Non-binding practical guide with a view to facilitate the implementation of the Directive 2013/35/EU on the minimum health and safety requirements regarding exposure of workers to the risks arising from EMF” to the plenary meeting of the Advisory Committee for Safety and Health at Work for adoption under the condition that an ultimate reading will be done by the Commission helped by experts;
- the inclusion of other appendices in the main publication (volume I);
- the separate publication of the case studies (currently annex G) (volume II);
- the Commission is invited to put the final non-binding guide in the appropriate European Commission format and to make it available in all EU languages;
- the Commission is invited to make available the final non-binding guide in a web-based publication;
- the Commission may consider publishing short guide for SME’s.