



**NSAI**

# ANNUAL REPORT 2019

**NSAI TECHNICAL COMMITTEES  
(NSAI/ETC/TC 15 HUMAN  
EXPOSURE TO  
ELECTROMAGNETIC FIELDS)**

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## 1 Chairman's Statement

NSAI/ETC/TC 15 continues to function well with good input and participation from our experts for which we are grateful.

The issues with having standards listed as Harmonised in the OJEU continues. This places an additional burden on manufacturers to determine compliance with EU Directives including the Radio Equipment, Low Voltage and Medical Device Directives.

We are hopeful that the appointment of more HAS consultants by the EU Commission will help to alleviate this problem. New challenges for TC 15 include the verifying emissions from wireless charging including electric cars.

We look forward to another productive year in TC 15.

## 2 Introduction

This TC serves the telecommunication, ICT and power transmission sectors in Ireland. The protection of general consumer and user of electrical products that emit electromagnetic fields or transmit using radio frequency such as mobile phones, laptops, tablets and other transmitting devices is also within the remit of this committee.

The main activity for this committee is to monitor and provide input on the IEC and CENELEC standards developed to assess electromagnetic fields associated with human exposure or in the Human Environment. The standards produced are important as they are listed in the OJEU as harmonized standards under the Radio Equipment Directive and Low Voltage Directive.



The industry currently has 6 experts involved in international work

A total of 16 active national members

## 3 Scope of TC

NSAI/ETC/TC 15 provides a national forum for the review and contribution to the development of standards in the area of Electromagnetic fields and Human Health. The main focus of this committee is the work of CENELEC TC 106X and IEC TC 106.

Members of TC also play a role in promoting best practice nationally in relation to use of appropriate standards to ensure safety for human exposure to electromagnetic fields.

The committee mirrors the following international committees:

Committee Name	Committee Title
<b>IEC TC 106</b>	Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure
<b>CENELEC TC 106</b>	Electromagnetic fields in the human environment

## 4 Structure and Membership

There are no working groups under this committee. See the list of members below in 4.1.

### 4.1 Members

The list below are the members for the year:

Organisation	Name	Role
<b>Compliance Engineering Ireland</b>	J.McAuley P.Reilly	Chair Expert member
<b>ESBI</b>	R.Arthur & E. Harrington	2 Expert members
<b>Johnson Controls</b>	I.Brooker	Expert member
<b>2RN</b>	J. Evans	Expert member
<b>EIR</b>	M. Kane	Expert member
<b>Dell</b>	P. Kelleher	Expert member
<b>Apple</b>	F.Kiernan, Y.Liu & M.O'Dwyer	3 Expert members
<b>Intel</b>	T.O'Connell	Expert member
<b>Vodafone</b>	B.Phillips	Expert member
<b>EPA</b>	D. Fenton & Dr J.Vila	2 Expert members
<b>NSAI</b>	L.Hendy	Committee secretary

## 5 Summary of 2019 Activities

### 5.1 National

#### 5.1.1 Meetings

Committee members attended the following national meetings in NSAI as follows:

Meeting No.	Date	Minutes Reference ** optional**
1	10 <sup>th</sup> May 2019	N1031
2	18 <sup>th</sup> Nov 2019	N1039

#### 5.1.2 National Work

There were no national projects assigned to NSAI/ETC/TC 15 in 2018

### 5.2 International/Regional

#### 5.2.1 Meetings

Committee members attended international CENELEC (CLC) and IEC meetings as follows:

Committee Name	Location	Date	No. of Attendees
IEC TC 106 Plenary	Tokyo, Japan	11 to 15 <sup>th</sup> Nov 2019	0
CLC TC 106X	Brussels, Belgium	3 <sup>rd</sup> Dec 2019	2

## 5.2.2 International/Regional Work

Most of the international contributions of NSAI/ETC/TC 15 is focused at the European level. A number of national experts are members of the following CENELEC TC 106X working groups:

WG 1 - Mobile phones and base stations.

WG 2 – Anti-theft devices – I. Brooker is currently convenor of this international WG with two other national members also participating.

WG 7 – Broadcasting – 3 national experts involved in this group. This group developed EN 50496 – *Determination of workers exposure to EMF and assessment of risk at a broadcast sites*, and is currently developing prEN 50554 - Basic standard for the in-situ assessment of a broadcast site related to general public exposure to radio frequency electromagnetic fields. J.Evans participated in two meetings of this group in 2019.

WG 15 – EMF and implants – 3 national members engaged in this group. EN 50527 series has been developed by the group with 3 standards published to date. These set out risk assessment to consider for workers with active implants and are aimed at employers. PrEN 50527-2-3 is a new part that addresses assessment for workers with implantable neuro stimulators which is reached enquiry stage towards the end of 2019.

WG 17 - EMF Assessment in the electricity supply industry –EN 62110 addresses measurement of EMF generated by AC power systems. This standard is published, therefore this WG is dormant.

WG 20 - Reasonable foreseeable use – national members include Peter Kelleher and Ian Brooker. This was a new WG established in 2018 under CENELEC TC 106X to develop a technical report to provide guidance on “reasonable and foreseeable use” as stated in the relevant directives.

WG 21 - Basic standards and generic standards – This new group was established in 2018 and is a combination of the previous WG 3 & WG 4. This group is working on the following:

- prEN 50499 - Procedure for the assessment of the exposure of workers to electromagnetic fields.
- prEN 50413 - Basic standard on measurement and calculation procedures for human exposure to electric, magnetic and electromagnetic fields (0 Hz - 300 GHz) &
- prEN 50499 - Procedure for the assessment of the exposure of workers to electromagnetic fields.

At the international level national experts participate in two Working groups under IEC TC 106 as follows:

WG 8 – Addressing methods for assessment of contact current related to human exposures to electric, magnetic and electromagnetic fields.

WG 9 – Addressing methods for assessment of wireless Power Transfer (WPT) related to human exposures to electric, magnetic and electromagnetic fields.

## 5.2.3 International/Regional Standards Reviewed

The work programme of both CENELEC TC 106X and IEC TC 106 were monitored during 2019. For CENELEC TC 106X see the links below for the full work programme.

List of [Published standards](#)

List of [revisions and new standards](#)

Comments were submitted on the following:

- prEN 50554 – Basic standard for the in-situ assessment of a broadcast site related to general public exposure to radio frequency electromagnetic fields.
- Draft TR on “Reasonable foreseeable use”

## 5.3 Regulatory Development/Update

The Radio Frequency Directive (RED) incorporates radio equipment, Low Voltage and EMF Directive. These directives do not specify limits and rely on standards to specify correct and safe limits. This Directive also refers to “reasonably foreseeable” conditions. The standards developed by CENELEC TC 106X can be used to demonstrate compliance with these directives. A new CELELEC Technical Report is being developed to address “reasonably foreseeable” conditions.

## 6 Irish Publications/Reviews

### 6.1 Publications

There were no national projects assigned to ETC TC 15 in 2019.

The Committee did not publish any national deliverables this year.

## 7 Work programme for 2020 onwards

NSAI/ETC/TC 15 plans to continue to monitor the work of CENELEC TC 106X and IEC TC 106. National experts nominated to WG’s under CENELEC TC 106X will contribute to the work programme of this international standards committee.

## 8 Additional Information

None



Attendees at the NSAI ETC TC 15 May Meeting, held in NSAI offices.