



NSAI

ANNUAL REPORT 2025

**NSAI TECHNICAL COMMITTEES
(NSAI/ETC/TC 03 - POWER
INSTALLATIONS EXCEEDING 1KV
(1.5KV DC))**

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1 Chair Statement

In 2025 the NSAI/ETC/TC 03 committee held 4 Meetings, membership and contributions are very healthy. We have 27 members with all members engaging in 2025 and several new members in 2025. Some of the highlights of 2025 were:

- The committee welcomed new members from Eli Lilly, TLI Group and UCD Energy Institute to the committee in 2025;
- The committee published a National Forward in I.S. EN 61936 in relation to the Engineers Ireland issued a Practice Note "Competence of persons controlling, operating, and working on high-voltage apparatus";
- The committee has been actively attending CENELEC (CLC) and IEC meetings. Mostly remote but some in person meetings;
- The committee actively voted on 29 documents in 2025. The committee submitted 6 sets of comments;
- Some committee members are contributing to the working group NSAI/ETC/WG 01 as it continues work on HV & LV Earthing Systems to address the proliferation of LV earthing systems in close proximity to distribution and Transmission earthing systems as a result of Solar farms and electric vehicle charging points. Progress has been slower than expected.

Many Thanks to all involved.

Neil Cowap

Chair of NSAI/ETC/TC 03.

2 Introduction

NSAI/ETC/TC 03 is the technical committee responsible for preparing national installation standards for High Voltage power installations (exceeding 1 kV a.c. or 1,5 kV d.c.) located indoors or outdoors, including earthing. In 2019, the committee published a Standard Recommendation S.R. 61936:2019, "Guidelines on the application of I.S. EN 61936-1:2010&A1:2014, Power installations exceeding 1 kV a.c. - Part 1: Common rules".

The committee are responsible for the maintenance of S.R. 61936.

The committee has two Subcommittees which reports into it.

- NSAI/ETC/TC 03/SC 01 "Overhead electrical lines exceeding 1kVa.c.

This subcommittee was established to develop the Irish National Normative Aspects NNA to EN 50341-1 "Overhead electrical lines exceeding AC 1 KV - Part 1: General Requirements - Common Specifications", which will be I.S. EN 50341-2-11 "Overhead Electrical Lines Exceeding AC 1 KV - Part 2-1: National Normative Aspects (NNAs) For Ireland (based On EN 50341-1)". This committee is dormant.

- NSAI/ETC/TC 03/SC 02 "Insulators and surge Arresters"

As a result of restructuring within the Electrotechnical sector of NSAI, NSAI/ETC/TC 19 was disbanded and reformed as a subcommittee NSAI/ETC/TC 03/SC 02. This committee is dormant.

3 Scope of TC

NSAI/ETC/TC 03 is the Technical Committee responsible for preparing national installation standards for:

- Design,
- Operations and Maintenance,
- associated competence assessment/certification
 - of Designers
 - of assets designed
 - of assets constructed

of assets for High Voltage power installations (exceeding 1 kV a.c. or 1,5 kV d.c.) located indoors or outdoors, including earthing.

The standard specifies the design requirements (and associated pro-forma certification) of the installation, and the selection and erection of electrical equipment in order to ensure the safety of persons and the proper operation of the installation. The installation standard is not applicable to factory built and type tested equipment but is relevant to the installation of this equipment. The installation requirements defined in S.R. 61936 are not applicable to overhead and underground lines between separate installations.

The EN 50110 standard is applicable to all operation of and work activity on, with, or near electrical installations. These are electrical installations operating at voltage levels from and including extra-low voltage up to and including high voltage. This latter term includes those levels referred to as medium, high voltage and extra-high voltage. These electrical installations are designed for the generation, transmission, conversion, distribution and use of electrical power.

The work of this NSAI ETC TC3 committee focuses on installations operating at voltages above 1,000 Volts a.c. (question about auxiliary supplies).

The work of the committee is analogous to the work of NSAI ETC TC2 ‘Electrical Installations’ which develops and maintains the requirements for installations connected at low voltage. The work of this committee will also require coordination and cooperation with the scope of work associated with that of NSAI ETC TC 20 for Smart Grids.

The committee mirrors the following international committees:

Committee Name	Committee Title
IEC TC 99	Insulation co-ordination and system engineering of high voltage electrical power installations above 1,0 kV AC and 1,5 kV DC
IEC TC 115	High Voltage Direct Current (HVDC) transmission for DC voltages above 100 kV
IEC TC 78	Live Working
IEC PC 127	Low-voltage auxiliary power systems for electric power plants and substations
IEC PC 128	Operation of electrical installations
CLC BTTF 62-3	Operation of electrical installations
CLC TC 99X	Power installations exceeding 1 kV a.c. (1,5 kV d.c)

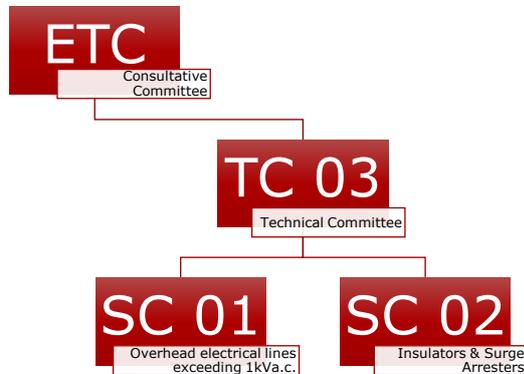
Subcommittee NSAI/ETC/TC 03/SC 02 mirrors the following international committees:

Committee Name	Committee Title
IEC TC 36	Insulators
IEC SC 36A	Insulated bushings
IEC TC 37	Surge arresters
IEC SC 37A	Low-voltage surge protective devices
IEC SC 37B	Components for low-voltage surge protection
CLC TC 36A	Insulated bushings
CLC TC 37A	Low-voltage surge protective devices

4 Structure and Membership

4.1 Structure

The Figure below illustrates the structure of the Committee:



4.2 Members

2025 brought several new members to the committee. The table below list the members represented on the committee for the year:

Organisation	Role
Eirgrid	National chairperson
AECOM	National committee member
AFRY	National committee member
Amazon Web	National committee member
Consultant	National committee member
Engineers Ireland	National committee member
Eirgrid	National committee member
Eli Lilly	National committee member
ESB Networks	National observer
ESBI	National observer
ESBN EMP	National committee member
FuturEnergy Ireland	National committee member
H&MV Engineering	National observer
Hitachi Energy	National committee member
Hivar Engineering	National observer
HSA	National committee member
HSE	National observer
HVSM	National committee member
IET	National committee member
MKW Training	National committee member
MOTTMAC	National committee member

NeoDyne	National committee member
Pfizer	National committee member
Premium Power	National observer
RPS-Tetrattech	National committee member
SIRO	National committee member
Statkraft	National committee member
TLI Group	National committee member
UCD	National committee member
NSAI SECRETARY	National secretary

4.2.1 Members of NSAI/ETC/TC 03/SC 01

Organisation	Role
NSAI	National Secretary
ESB	National Committee Member

4.2.2 Members of NSAI/ETC/TC 03/SC 02

Organisation	Role
NSAI	National secretary
ESB	National Chairperson
TE Connectivity Ireland LTD	National Committee Member
ESB	National Committee Member

5 Summary of 2025 Activities

5.1 National

The Technical Committee met 3 times in 2025, using MS Teams.

5.1.1 Meetings

Committee members attended 3 national meetings as follows:

Meeting No.	Date	Minutes Reference
1	2025/03/06	N1432
2	2025/06/26	N1441
3	2025/10/09	N1450

5.1.2 National Work

The committee have been working with EirGrid and ESB Network representatives to get the following text included in the 3rd Party declaration of conformance (doc) forms.

The relevant requirements of S.I. 299/2007, including I.S. EN 61936/2021, have been complied with.”

It is hoped that these two organisations along with the organisations represented on the committee will incorporate this text in their 3rd party doc forms.

The committee are following the work of ESN work in relation to DERMS (Distributed Energy and Resource Management Systems).

Members of the committee are actively contributing to CENELEC BTTF 62-3 in the areas of Arc Flash and Safe working on EV’s.

The committee are working on producing a draft HV work completion cert which will be used to cover work at varies part of the installation.

Members of the committee actively contributed to the work of the following technical specification which was published by IEC at the end of 2025. TS 63527:2025 Safe management and operation of electrical installations. It is hoped that the guidance provided in this technical specification will be referenced by the HSA on their website in 2026. [Information Guidance Legislation - Health and Safety Authority](#)

The committee are liaising with ESB Networks Distribution Code Review Panel through a nominated representative.

The committee welcomed new members from Pfizer, Amazon and MKW Training to the committee in 2025.

5.2 International/Regional

5.2.1 Meetings

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

Committee Name	Location	Date	Attended
IEC TC 99 Plenary	New Delhi, India	2025-09-15 – 2025-09-19	2
IEC TC 99 Maintenance of IEC 61936-1	New Delhi, India		3
PC 127	China	2025-11-03 – 2025-11-04	1

5.2.2 International/Regional Work

NSAI ETC TC 03 member holds a leadership role in:

- Convenor of IEC PC 127/WG 3 – System design.

Members of the committee attended maintenance teams, working group and project team meeting. Committee members have been actively attending IEC meeting in relation to IEC TS 63527, Safe management and operation of electrical installations, and have been attending meetings of CENELEC BTTF 62-3 in the areas of Arc Flash and Safe working on EV’s.

5.2.3 International/Regional Standards Reviewed

The committee continue to review standards as they arise in IEC & CLC.

The committee has been actively attending IEC meeting in relation to IEC 61936 and TS 63527 Safe management and operation of electrical installations and have been attending CLC meetings in relation to EN 50110 and various Working group within BTTF 62-3.

5.2.4 International/Regional Voting Results

NSAI/ETC/TC 03 vote on all documents at IEC and CENELEC documents using a default voting strategy. The committee actively voted on 21 documents in 2025. The committee submitted 1 set of comments.

IEC/TC 99: Ireland has actively voted 6 times in 2025 and submitted 1 set of comments.

IEC/TC 78: Ireland has actively voted 3 time in 2025.

IEC/TC 115: Ireland has actively voted 8 times in 2025.

IEC/PC 127: Ireland has actively voted 3 times in 2025.

IEC/PC 128: Ireland has actively voted 3 times in 2025.

Body	Vote Reference	Comments Submitted	Decision	WIID
IEC	115/393/NP		No Comment	
IEC	115/394/CD		No Comment	
IEC	115/405/CD		No Comment	
IEC	115/407/CD		No Comment	
IEC	115/415/CD		No Comment	
IEC	115/418/DTR	Yes	Approve	
IEC	115/418/DTR		No Comment	
IEC	115/419/CD		No Comment	
IEC	127/71/DTS		No Comment	
IEC	127/72/Q		Abstain	
IEC	127/80/DC		No Comment	
IEC	128/59/DTS	Yes	Approve	
IEC	78/1505/Q		Abstain	
IEC	78/1513/CDV		Abstain	
IEC	78/1521/CDV		Abstain	

IEC	<u>99/484/CD</u>	Yes	Approve
IEC	<u>99/486/Q</u>		Abstain
IEC	<u>99/490/NP</u>		No Comment
IEC	<u>99/491/CD</u>		No Comment
IEC	<u>99/494/CD</u>		No Comment
IEC	<u>99/CIB</u>	Yes	Comments Only

5.3 Regulatory Development/Update

No updates.

6 Irish Publications/Reviews

6.1 Publications

The Committee did not publish any national deliverables this year, however Members of the committee actively contributed to the work of the following technical specification which was published by IEC at the end of 2025. TS 63527:2025 Safe management and operation of electrical installations.

6.2 Reviews

The Committee reviewed the following Irish national deliverables:

- S.R. 61936-1:2019

7 Work programme for 2026 onwards

The committee will continue to explore the following areas for 2026:

- Socialisation of I.S. EN 61936 & I.S. EN 50110.
 - to get the requirements included on the EirGrid and ESBN Declaration of fitness documents.
- Draft completion cert to be shared with IEC TC 99 WG 4.
- Collaborate with Working group NSAI/ETC/WG 01 HV & LV Earthing Systems
- DERMS (Distributed Energy and Resource Management Systems)
- Provide input in ESBN Distribution Code Review Panel (DCRP) when necessary
- Irish engagement with IEC & CLC TC's

The committee will continue attendance and contribution at the IEC & CLC level throughout 2026 by reviewing, inputting Irish comments and voting on the various stages of standards development.

7.1 IEC Work Programme:

The number of work programmes taking place in the relevant IEC committees are listed and detailed below:

- IEC TC 99 6 work programmes,
- IEC TC 78 7 work programmes,
- IEC TC 115 10 work programmes,
- IEC PC 127 2 work programmes

IEC PC 128 0 work programmes

IEC	Project Reference	Title	Document Reference	Working Group	Fcst. Publ. Date
TC 99	IEC 60071-1 ED10	Insulation co-ordination - Part 1: Definitions, principles and rules	99/520/C DV	MT 10	2027-02
TC 99	IEC 60071-2 ED6	Insulation co-ordination - Part 2: Application guidelines	99/449/RR	MT 9	2027-12
TC 99	IEC TS 60071-4 ED1	Instructions for simulation-based insulation coordination and modelling of electrical networks	99/490/NP	WG 14	2026-04
TC 99	IEC 60071-14 ED1	Insulation co-ordination - Part 14: Application procedures for AC/DC filters	99/501/C D	JWG 13	2027-04
TC 99	IEC TR 60071-15 ED1	Insulation co-ordination — Part 15: Insulation co-ordination for DC transmission lines	99/494/C D	JWG 13	2027-10
TC 99	IEC 61936-0 ED1	Power installations exceeding 1 kV AC and 1,5 kV DC - Part 0: Principles to be observed in the design and erection of high voltage installations - Safety of high voltage installations	99/484/C D	MT 12	2027-02
TC 78	IEC 60743/AMD1 ED3	Amendment 1 - Live working - Terminology for tools, devices and equipment	78/1539/F DIS	WG 1	2026-02
TC 78	IEC 60903 ED4	Live working - Electrical insulating gloves	78/1513/C DV	MT 60903-984	2026-09
TC 78	IEC 61111 ED3	Live working - Electrical insulating matting	78/1510/C DV	MT 61111-61112	2026-06
TC 78	IEC 61482-2 ED3	Live working - Protective clothing against the thermal hazards of an electric arc - Part 2: Requirements	78/1516/R R	MT 61482-2	2027-04
TC 78	IEC 62192-1 ED1	Rope for electrical work – Part 1: work within the live working zone or in contact with live parts	78/1540/R R	MT 62192	2027-03
TC 78	IEC 63232-2 ED1	Live working - Hand protective devices against the thermal hazards of an electric arc - Part 2: Requirements	78/1463/C D	PT 63232	2027-01
TC 78	IEC TR 63707 ED1	Live working in the presence of RF fields		PT 78-904	2026-05

TC 115	PWI TR 115-32	DC circuit breaker system integration on-site tests		ahG 17	
TC 115	PWI TR 115-33	Guideline for System Design of HVDC converter stations - Part2: using Voltage Sourced Converters		WG 5	
TC 115	IEC TS 61973 ED2	High voltage direct current (HVDC) substation audible noise	115/415/CD	JMT 1	2027-12
TC 115	IEC TS 62978 ED1	HVDC Installations - Guidelines on Asset Management	115/421/CD	WG 4	2026-12
TC 115	IEC TS 63014-1 ED2	High voltage direct current (HVDC) power transmission – System requirements for DC-side equipment - Part 1: Common equipment and equipment specific to Line-Commutated Converters	115/422/CD	WG 9	2027-03
TC 115	IEC TS 63014-2 ED1	High voltage direct current (HVDC) power transmission – System requirements for DC-side equipment - Part2: Using voltage sourced converters	115/423/CD	WG 9	2027-05
TC 115	IEC TS 63291-1 ED2	High voltage direct current (HVDC) grid systems and connected converter stations - Guideline and parameter lists for functional specifications - Part 1: Guideline	115/389/RR	WG 15	2027-12
TC 115	IEC TS 63291-2 ED2	High voltage direct current (HVDC) grid systems and connected converter stations - Guideline and parameter lists for functional specifications - Part 2: Parameter lists	115/390/RR	WG 15	2027-12
TC 115	IEC TR 63363-2 ED1	Performance of voltage sourced converter (VSC) based high-voltage direct current (HVDC) transmission - Part 2: Transient conditions	115/419/CD	JWG 11	2026-10
TC 115	IEC TS 63529 ED1	DC side harmonics & filtering in HVDC transmission systems	115/410/DTS	WG 7	2026-02
PC 127	IEC TS 63346-2-1 ED1	Low-voltage auxiliary power systems - Part 2-1: Design criteria - General requirements	127/77/DTS	WG 3	2026-05
PC 127	IEC TS 63346-2-2 ED1	Low-voltage auxiliary power systems - Part 2-2: Design criteria - Low-voltage DC auxiliary power systems for substations	127/71/DTS	WG 3	2026-05

7.2 CENELEC Work Programme:

The number of work programmes taking place in the relevant CENELEC committees are listed and detailed below:

- CLC TC 99x 4 work programmes,
- BTF 62-3 1 work programme.

CLC TC	WI Number	Reference	Title
TC 99x	79504	prEN IEC 60071-1:2026	Insulation co-ordination - Part 1: Definitions, principles and rules
TC 99x	79503	prEN IEC 60071-2	Insulation co-ordination - Part 2: Application guidelines
TC 99x	78093	prEN IEC 60071-14	Insulation co-ordination - Part 14: Application procedures for AC/DC filters
TC 99x	79499	prEN IEC 61936-0	Power installations exceeding 1 kv AC and 1,5 kv DC - Part 0: Principles to be observed in the design and erection of high voltage installations - Safety of high voltage installations
BTF 62-3	82282	EN 50110-1:2023/prA1:2026	Operation of electrical installations - Part 1: General requirements

It should be noted that the BTF groups are doing work on Arc Flash and on Safe working on EV's. The SOLAS representatives are working on the Safe working on EV's.

8 Additional Information

No additional information to add.