



# ANNUAL REPORT 2022

NSAI TECHNICAL COMMITTEE  
NSAI/ETC/TC 20 - "SMART GRIDS,  
RENEWABLES, ELECTRIC VEHICLES  
AND ENERGY EFFICIENCY"

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## 1 Chair Statement

The Chairman expresses his thanks and appreciation to all members of NSAI/ETC/TC 20 for their participation, support and contributions to the work of NSAI/ETC/TC 20, during a very challenging period.

The new Chairman (co-opted in September 2022) wishes to convey his thanks to Mr. Gerard Buckley for all the work he has done in the many years he has been Chairman.

The new Chairman proposes to focus the 2023 work programme for the committee on a targeted number of standards, given the vast number of standards that under the committee's scope.

## 2 Introduction

NSAI/ETC/TC 20 was established as a National Mirror Committee to mirror the work of several European and international standards committees in the area of Smart Grids, Renewables, Electric Vehicles and Energy Efficiency. The list of committees currently being followed in full or in part is listed in paragraph 3.

## 3 Scope of TC

The scope of NSAI/ETC/TC 20 is to follow and contribute to the work of the CENELEC and IEC committees listed below.

Committee Name	Committee Title
<b>CENELEC TC 8X</b>	Systems aspects of electrical energy supply
<b>IEC TC 8</b>	Systems aspects of electrical energy supply
<b>IEC TC 8/SC 8A</b>	Grid Integration of Renewable Energy Generation
<b>IEC TC 8/SC 8B</b>	Decentralized electrical energy systems
<b>CENELEC TC 13</b>	Electrical energy measurement and control
<b>CENELEC TC 21X</b>	Secondary cells and batteries
<b>CENELEC TC 22X</b>	Power electronics
<b>CENELEC TC 57</b>	Power systems management and associated information exchange
<b>IEC TC 57</b>	Power systems management and associated information exchange
<b>CENELEC TC 64</b>	Electrical installations and protection against electric shock
<b>CENELEC TC 69X</b>	Electric systems for electric road vehicles
<b>IEC TC 69</b>	Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks
<b>CENELEC TC 72</b>	Automatic electrical controls
<b>CENELEC TC 82</b>	Solar photovoltaic energy systems
<b>CENELEC TC 88</b>	Wind Energy
<b>IEC TC 88</b>	Wind Energy
<b>CENELEC TC 95X</b>	Measuring relays and protection equipment
<b>IEC TC 120</b>	Electrical Energy Storage (EES) Systems
<b>CEN-CENELEC-ETSI CG-SG</b>	CEN-CLC-ETSI Co-ordination Group on Smart Grids and Smart Meters
<b>IEC SyC SET</b>	Sustainable Electrified Transportation

## 4 Structure and Membership

### 4.1 Structure

The Figure below illustrates the structure of the Committee:



### 4.2 Member Organisations

The list below are the member organisations for the year 2022:

Organisation	Role
<b>Utility Consultancy Partners</b>	Chairperson outgoing
<b>ESB</b>	Chairperson incoming
<b>NSAI</b>	Secretary
<b>ABB Limited</b>	Committee Member
<b>Analog Devices International</b>	Committee Member
<b>Cork Institute of Technology</b>	Committee Member
<b>DP Energy</b>	Committee Member
<b>Dundalk Institute of Technology</b>	Committee Member
<b>EirGrid</b>	Committee Member
<b>Electric Power Research Institute</b>	Committee Member
<b>Eninserv</b>	Committee Member
<b>ESB</b>	Committee Member
<b>Garrad Hassan Ireland Limited</b>	Committee Member
<b>Glen Dimplex</b>	Committee Member
<b>NUI Galway</b>	Committee Member
<b>Renewable Power Generation Limited</b>	Committee Member
<b>RPS Group</b>	Committee Member
<b>Sustainable Energy Authority of Ireland</b>	Committee Member
<b>Technical University Dublin</b>	Committee Member
<b>Tomas Blodau Wind Energy Consultancy</b>	Committee Member
<b>TU Dublin</b>	Committee Member
<b>University of Limerick</b>	Committee Member

## 5 Summary of 2022 Activities

### 5.1 National

## 5.1.1 Meetings

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

Meeting No.	Date	Minutes Reference
1	8 February 2022	N669
2	10 May 2022	N675
3	28 September 2022	N686

## 5.2 International/Regional

### 5.2.1 Meetings

Committee members attended meetings as follows:

Committee Name	Location	Date	No. of Attendees
IEC TC 120	Virtual	7-9 February 2022	1
CLC TC 88	Virtual	10 March 2022	1
IEC TC 120	Virtual	14-15 April 2022	1
IEC TC 120	Virtual	11-13 May 2022	1
CLC TC 57	Virtual	18 May 2022	1
IEC TC 88/MT 2	Virtual	26 May 2022	1
IEC TC 88/MT 2	Virtual	23 June 2022	1
IEC TC 8/SC 8B/WG 4	Virtual	29 June 2022	1
IEC TC 88/MT 2	Virtual	28 July 2022	1
IEC TC 88/MT 2	Virtual	25 August 2022	1
IEC TC 57/JWG 15	Virtual	31 August 2022	1
IEC TC 120	Virtual	6-8 September 2022	1
IEC TC 57/JWG 15	Virtual	29 September 2022	1
IEC TC 120	Virtual	4 October 2022	1
IEC TC 88/MT 2	Virtual	27 October 2022	1
IEC TC 23/SC 23H	San Francisco	01 November 2022	1
IEC General Assembly	San Francisco	04 November 2022	1
CLC TC 8X	Brussels	18 November 2022	1
IEC TC 120	Virtual	28-30 November 2022	1
IEC TC 88/MT 2	Virtual	20 December 2022	1
IEC TC 88 / PT 61400-28	Virtual	Every Friday	1
IEC TC 88 / WG 15	Virtual	2 meetings	1

### 5.2.2 International/Regional Work

Ireland is following and contributing to the development of a number of Standards and Technical Specifications associated with the electrotechnical aspects of Smart and Renewable Energy. Some of the members are participating directly in working groups and project teams within the technical committees.

Members of NSAI/ETC/TC 20 are actively involved in standards development work at International and European level.

## 5.2.3 International/Regional Standards Reviewed

IEC TR 63401-1	Dynamic characteristics of inverter-based resources in bulk power systems - Part 1: Interconnecting inverter-based resources to low short circuit ratio AC networks
IEC 61850	Communication networks and systems for power utility automation
IEC 61980-3	Electric vehicle wireless power transfer (WPT) systems - Part 3: Specific requirements for magnetic field wireless power transfer systems
EN 50549-1	Requirements for generating plants to be connected in parallel with distribution networks - Part 1: Connection to a LV distribution network - Generating plants up to and including Type B
EN 50549-10	Requirements for generating plants to be connected in parallel with distribution networks - Part 10: Tests for conformity assessment of generating units
IEC 61400-28	Wind energy generation systems - Part 28: Through life management and life extension of wind power assets
IEC 61400-2	Wind turbines - Part 2: Small wind turbines
IEC 61400-15	Assessment of wind resource, energy yield and site suitability input conditions for wind power plants

## 5.2.4 International/Regional Voting Results

The committee voted on 1 international ballot in 2022.

## 5.3 Regulatory Development/Update

There are no current European Regulations applicable to the suite of Standards being developed.

## 6 Irish Publications/Reviews

### 6.1 Publications

The Committee did not publish any deliverables this year.

### 6.2 Reviews

The Committee did not review any Irish national deliverables.

## 7 Work programme for 2023 onwards

The committee will be reviewing its scope in 2023 with a view to prioritising certain areas as the number of areas being covered has become quite extensive.