A. **STATE TITLE AND SCOPE OF TC**

TC 11 – Overhead lines

IEC TC11 prepares and maintains International Standards for Overhead Lines rated above 1 kV AC and 1.5 kV DC Nominal Voltage, excluding railway traction supports and line materials.

These Standards provides design criteria or requirements that may serve as a guide to national regulations differing from each other only in the local conditions and in the assumed safety level.

These Standards deals with mechanical loadings and strength of the line, with clearances and with tests on supports, fittings and foundations.

Including design requirements for supports and foundations to be able to withstand the required mechanical loadings.

Excluding Recommendations dealing with tests on conductors and insulators established respectively by IEC Technical Committees TC 7 and TC 36.
B. **Management Structure of the TC**

Currently the structure of TC11 is very flat with leadership consisting of Committee Chairperson and Secretariat. Joint Working group (JWG13) and MT1 convenors report to this leadership team and it does not the Committee Advisory Group (CAG), however it may be established in a case where the Chairperson needs guidance on specific larger issue. JWG13 consist of experts from IEC TC11 and IEC TC7: *Overhead electrical conductors* respectively. MT2 which was established to look into 466 Parts was disbanded during the plenary meeting in 2019 October in Shanghai (China). The operation of the Overhead lines is shown in figure B.1.

* Does not exist within the committee currently.

+ it has been disbanded.

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C. **Business Environment**

In developing countries, there are many new overhead line constructions, in contrast to other countries, especially the developed countries where new constructions have slowed and older overhead lines have started reaching the end of their life cycle, and may need refurbishment. On account of the reduced rate of new construction in developed Country there is the need to increase transmission capacity of existing OHLs. Solutions are the replacement of existing conductors with high temperature conductors, use of RTM (Real time Monitoring) systems, use of probability based ratings, voltage uprating, use of HSIL lines and AC to DC conversion of lines. There is also the challenge of reducing the environmental impact of overhead lines both from an aesthetic impact and minimization of electric and magnetic fields.

In addition to the primary aspect of transportation of electric power, the safety of workers involved in the erection and maintenance of overhead lines has to be taken into account.

With the increased interest in HVDC (and EHVDC) transmission lines TC 11 needs to ensure that publications issued are relevant to the needs of both the AC transmission and DC transmission communities.
D. MARKET DEMAND

The customers for standards developed by TC 11 are electricity utilities, T&D Companies, manufacturers, test laboratories, regulators, researchers, overhead line contractors, designers and end-users.

Certification of some of the overhead line components have become common and the IEC standards have become the basis of many of the certifications with significant content added from national standards.

There is some duplication of work by CENELEC, however CENELEC have signalled that they do not regard harmonization as a priority (also in account of the recent modifications introduced in the new edition (2012) of EN 50341-1 with direct references to Eurocodes.

E. SUSTAINABLE DEVELOPMENT GOALS

Indicate the Sustainable Development Goals (SDGs) that are addressed by work within the TC/SC. Indicate each SDG indicator affected (reference spreadsheet available at https://www.iec.ch/SDG/, and provide specific information about how the TC/SC is addressing the SDG. Consider both direct and indirect impacts of the work of the TC/SC.

☐ GOAL 1: No Poverty
☐ GOAL 2: Zero Hunger
☐ GOAL 3: Good Health and Well-being
☐ GOAL 4: Quality Education
☐ GOAL 5: Gender Equality
☐ GOAL 6: Clean Water and Sanitation
☐ GOAL 7: Affordable and Clean Energy
☒ GOAL 8: Decent Work & Economic Growth
☒ GOAL 9: Industry, Innovation & Infrastructure
☐ GOAL 10: Reduced Inequality
☐ GOAL 11: Sustainable Cities and Communities
☐ GOAL 12: Responsible Consumption & Production
☐ GOAL 13: Climate Action
☐ GOAL 14: Life Below Water
☐ GOAL 15: Life on Land
☐ GOAL 16: Peace, Justice Strong Institutions
☐ GOAL 17: Partnerships to achieve the Goals

F. TRENDS IN TECHNOLOGY AND IN THE MARKET

The increased interest in EHVDC transmission and possible increase in AC transmission voltages (also by conversion of existing AC lines). The replacement of existing conductors with High Temperature Low Sag conductors. The adoption of innovative supports solutions. New technologies in the construction of overhead lines. The design of high surge impedance lines and bundle expansion (BEX) Reducing the cost of HV DC Convertor Equipment.

Most of the manufacturers operate internationally with design offices and manufacturing in multiple countries. Local manufacturing and testing enables local content and reduced transportation costs.
G. SYSTEMS APPROACH ASPECTS (SEE DIRECTIVES PART 1 ANNEX SP)

TC 11 will actively continue to promote the establishment of liaisons with other committees. There is interdependence with committees as listed below:

TC 11 as a customer for standards of other Technical Committees.
TC 7 Overhead conductors
TC 42 High Voltage Test Techniques
TC 11 as a supplier of standards to other Technical Committees.
TC 115 High Voltage DC
TC 122 UHV AC transmission systems

Cooperation established:
Liaison officers, and experts participating in IEC TC 7, TC 36, TC 78, TC 99 and TC122 (request of liaison member)

Cooperation to be established: IEC TC 106; TC 115.

Experts working in other Technical Committees CIGRE SC B2 and CENELEC TC 11

H. CONFORMITY ASSESSMENT

With reference to Clause 33 of Part 2 of the ISO/IEC directives, are all your publications in line with the requirements related to conformity assessment aspects?

Yes

Will the TC/SC publications be used for IEC Conformity Assessment Systems (IECEE, IECEx, IECQ, IECRE)?

No

Will any of your standards include test specifications, reproducible test requirements, and test methods?

Yes

Are there likely to be special conformity assessment requirements generated by any standards projects? If yes, list which projects.

No

I. 3-5 YEAR PROJECTED STRATEGIC OBJECTIVES, ACTIONS, TARGET DATES

<table>
<thead>
<tr>
<th>STRATEGIC OBJECTIVES 3-5 YEARS</th>
<th>ACTIONS TO SUPPORT THE STRATEGIC OBJECTIVES</th>
<th>TARGET DATE(S) TO COMPLETE THE ACTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain the time development of TC 11 work within requested time scales</td>
<td>Complete the revisions of IEC 61284.</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Keep TC 11 Standards up to date reflecting new technologies and user requirements</td>
<td>Review of publications that will reach the stability date within two years, assess viability, and technology changes and initiate action for revision.</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Task</td>
<td>Description</td>
<td>Status</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Continue work on High Temperature fittings to IEC 61284</td>
<td>Established Joint W G13 with TC 7</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Coordination with Cigre for future revision of IEC TC11 standards</td>
<td>MT1 to verify if IEC 60826 can be revised to introduce structural design methods and to analyse Cigre WG on metrological models' effects to loads on lines</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Start work on a standard for fittings for optical cables</td>
<td>Establish a working group to start the development of the standard</td>
<td>Ongoing</td>
</tr>
</tbody>
</table>

Note: The progress on the actions should be reported in the RSMB.