A. STATE TITLE AND SCOPE OF TC

Are there any new or emerging trends in technology that will impact the scope and work activities of the TC? Please describe briefly.

Do you need to update your scope to reflect new and emerging technologies? If yes, will these changes impact another TC’s scope or work activities?

If yes, describe how these will impact another TC(s) and list the TC(s) it would impact.

Title of TC 99:

System engineering and erection of electrical power installations in systems with nominal voltages above 1 kV a.c. and 1.5 kV d.c., particularly concerning safety aspects

Scope of TC 99:

"Standardisation of common rules and particular requirements for system engineering and erection of electrical power installations with nominal voltages above 1 kV a.c. and 1.5 kV d.c., for power generation, transmission, distribution, and consumer premises, in both indoor and outdoor situations, with particular consideration of safety aspects."

TC 99 recognizes that there might be some common interests between TC 18, TC 88, TC 115 and TC 99 in the development of standards in the area of off-shore HVDC and HVAC installations, to manage and optimize the performance of electrical transmission systems as well as windmill farms as they evolve and expand off-shore.

B. MANAGEMENT STRUCTURE OF THE TC

Describe the management structure of the TC (use of an organizational chart is acceptable) (should be integrated by CO automatically) and, if relevant (for example an unusual structure is used), provide the rationale as to why this structure is used.

Note: Check if the information on the IEC website is complete.

When was the last time the TC reviewed its management structure? Describe any changes made. When does the TC intend to review its current management structure? In the future, will the TC change the current structure, for example due to new and emerging technologies, product withdrawal, change in regulations etc. Please describe.

Make sure the overview includes:

- any joint working groups with other committees,
- any special groups like advisory groups, editing groups, etc.

Chairman: Mr Enrico Maria Carlini, Italy

Secretary: Ms Erandi Chandrasekare, Australia
Maintenance Teams:

MT 4  Maintenance Team for IEC 61936-1

Joint Maintenance Teams:

A joint maintenance team (JMT 7) will be established with TC 28, TC 115, TC 22 and SC 22F to revise IEC/TS 61936-2. The administrative responsibility will remain with TC 99.

Ad hoc groups:

An ad hoc group (AHG 6) will be established to prepare a new work item proposal on off-shore installations (refer to Section D below)

Scope of AHG 6:

To consider the particular requirements of installations above 1kV a.c and 1,5kV d.c off-shore installations and installations in compact space installations, particularly installations such as wind turbines and other renewable energy sources as well as transportable and mobile substations. The AHG will seek to liaise with TC18 to ensure that facilities connected to the electricity networks adopt a consistent approach with respect to high voltage installations particularly concerning safety aspects.

C. BUSINESS ENVIRONMENT

Provide the rationale for the market relevance of the future standards being produced in the TC.

If readily available, provide an indication of global or regional sales of products or services related to the TC/SC work and state the source of the data.

Specify if standards will be significantly effective for assessing regulatory compliance.

The safety of high voltage installations is of prime importance. Therefore equipment must be designed, manufactured and installed to ensure –

(a) protection against inadvertent contact with live parts; and
(b) the safe operation of the equipment and the installation.

The responsibility for the components of the power system remains with the relevant product committees.

D. MARKET DEMAND

Provide a list of likely customers of the standards (suppliers, specifiers, testing bodies, regulators, installers, other TC/SC’s etc.). Do not specify company names, only categories of customers.

Increasing service of supply for installation of electrical scheme and equipment necessitates the revision of existing standards and development of new standards.

The world market for high voltage installations can be considered an open market. In this field IEC standards are accepted world-wide. Many countries which do not have a national standard for high voltage installations will benefit by the work of TC 99.

There is a market need for the development of standards in the area of off-shore HVDC and HVAC installations, to manage and optimize the performance of electrical transmission systems as well as windmill farms as they evolve and expand off-shore. Customers of the standards are utilities, manufacturers, Engineering Procurement Construction (EPC) and industry. TC 99 recognizes that there might be some common interests between TC18 and TC99 in developing the standards in this area.
### E. Trends in Technology and in the Market

If any, indicate the current or expected trends in the technology or in the market covered by the products of your TC/SC.

The ever increasing use of the latest technology leads to the use of new or modified electrical equipment (e.g. compact solution, storage, subsea installations). This drives the need to continual review of the high voltage installation requirements and to provide modifications or add new requirements.

### F. System Approach Aspects (Reference - AC/33/2013)

Does your TC/SC have a need for a systems approach?

If so:
- Will the Systems work be in a single TC or in multiple TCs?
- Will a Systems Evaluation Group (SEG), Systems Committee (SyC), or Systems Resource Group be required?
- Is your TC/SC work of relevance to ISO?
- Is or are there fora or consortia working in parallel to IEC? Is there a chance to integrate this work in your TC/SC?

This should not only be restricted to the customer/supplier relationships with other TC/SCs indicating types of co-operation (e.g. liaisons, joint working groups) but be of a more generic nature.

If there is no need for a systems approach as outlined in AC/33/2013, is it intended a TC would not be requested to report on general systems approach considerations such as customer/supplier relationships, liaisons, joint WGs, etc. as referenced in the system approach matrix illustrated in slide 14 of the presentation attached to AC/37/2006?

<table>
<thead>
<tr>
<th>Liaison Committee</th>
<th>Role of the liaison committee</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC 11</td>
<td>Customer</td>
<td>Overhead lines</td>
</tr>
<tr>
<td>TC 115</td>
<td>Customer</td>
<td>High Voltage Direct Current (HVDC) transmission for DC</td>
</tr>
<tr>
<td>SC 17A</td>
<td>Supplier</td>
<td>Equipment</td>
</tr>
<tr>
<td>SC 17C</td>
<td>Supplier</td>
<td>Assemblies</td>
</tr>
<tr>
<td>TC 22</td>
<td>Supplier</td>
<td>Power electronic systems and equipment</td>
</tr>
<tr>
<td>TC 64</td>
<td>Supplier</td>
<td>Electrical installations and protection against electric</td>
</tr>
<tr>
<td>TC 78</td>
<td>Supplier</td>
<td>Live working</td>
</tr>
<tr>
<td>TC 89</td>
<td>Supplier</td>
<td>Fire hazard testing</td>
</tr>
<tr>
<td>TC 88</td>
<td>Other committees</td>
<td>Wind energy generation systems</td>
</tr>
<tr>
<td>TC 9</td>
<td>Other committees</td>
<td>Electrical equipment and systems for railways</td>
</tr>
<tr>
<td>TC 97</td>
<td>Other committees</td>
<td>Electrical installations for lighting and beaconing of</td>
</tr>
<tr>
<td>ACTAD</td>
<td>Other committees</td>
<td>Advisory Committee on Electricity Transmission and Distribution</td>
</tr>
</tbody>
</table>

Customer – Committees that use standards produced by TC 99
Supplier – Committees that produce standards used by TC 99
Other Committees – Committees to be in liaison with for technical consistency
G. Conformity Assessment

With reference to clause 6.7 of Part 2 of the ISO/IEC directives, are all you publications in line with the requirements related to conformity assessment aspects?

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

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

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

TC 99 publications do not include test specifications, reproducible test requirements and test methods.

H. 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>Define standards for the design and erection of high voltage electrical installation, taking into account in particular the safety aspects.</td>
<td>• update the existing basic standard for AC high voltage systems (IEC 61936-1);&lt;br&gt;• review and update the technical specification on DC (IEC TS 61936-2);&lt;br&gt;• develop new publications (refer to Section D), engaging more members with expertise in relevant areas and strengthening the co-operation with relevant committees to ensure no overlapping of standardization tasks with other technical committees</td>
<td>• as per the stability date&lt;br&gt;• as per the stability date&lt;br&gt;NP to be made available by the next plenary meeting</td>
</tr>
</tbody>
</table>

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