

## RESEARCH AND STANDARDISATION

### RESPONSE FORM for Standardisation groups

### To contribute to *EMPIR - the European Metrology Programme for Innovation and Research* \*

**Objective: to collect standardization needs and suggestions to develop research projects in testing and measurements for the upcoming EMPIR calls in 2020**

In the frame of the between CEN, CENELEC and EURAMET, CEN and CENELEC have been invited by the EURAMET Management to put forward their **testing and measurement needs in research** for consideration by metrology institutes for future calls under EMPIR.

**Relevant technical groups** (sector fora, advisory boards, coordination groups, TCs, WGs...) **are invited to contribute with**

- a short introduction or an overview paper of their unaddressed standardization needs for testing and measurement, and
- a contact person (secretary, chair, convenor, liaison officer, etc.) whom proposers for the Potential Research Topics can contact,

by using this Response Form and send it at :

STAIR EMPIR secretariat, Mr Ortwin Costenoble: [empir@nen.nl](mailto:empir@nen.nl)

Deadline for the consultation: **13 December 2019**.

*Proof of need by the TC/SC is highly recommended for a successful submission.*

<b>Source of the identified need</b> (identification of TC, WG, etc, incl. title)	<input type="checkbox"/> CEN/TC 0/WG 0 <input checked="" type="checkbox"/> CLC/TC 13/WG 01 <input type="checkbox"/> ISO/TC 0/SC 0 / WG 0 <input checked="" type="checkbox"/> IEC/TC 13 / WG 11 <input type="checkbox"/> Other, namely <i>Identification, Title</i>
<b>European entity</b> responsible for submission of the need	<i>CEN/CLC TC13 WG01 Electricity meters for active energy of class a, b and c</i>
<b>Person that can be contacted for more detail</b>	<i>Raimond Bauknecht Raimond.Bauknecht@landisgyr.com +41419356048 Switzerland</i>
<b>Unaddressed need</b> (short description)	<i>To investigate specific metrological aspects of DC electricity meters for inclusion in a future revision of the new 62053-41 standard.</i>
<b>Further explanation of need</b> (TC business plan, road map, formal decision, work item, etc.)	<i>Further explanation on the need, why it shall be filled and why specifically related to standard Due to new technologies such as PV, EV, or storage, the use of DC voltage supply is increasing, and, consequently, so is the need for standardisation of DC electricity metering. IEC TC13 is currently developing the 62053-41 standard for DC meters, which is expected to be published in 2020. This</i>

	<p><i>new standard is based on the standards for AC meters, with some specific DC aspects. However, there is a need to investigate additional specific metrological aspects of DC meters, which should be included in a future revision of the standard, but which have not been investigated due a lack of metrological expertise. Examples of such aspects are ripples in EV charging stations: which magnitudes of ripple currents/voltages exist in the several hundreds of hertz to tens of kilohertz range, what about the immunity of DC energy measurement against such ripples, how to measure energy (active/reactive) contained in such ripples, how to measure the losses due to cables, et cetera.</i></p> <p><i>Estimated time frame that need shall be fulfilled</i></p> <p><i>This metrological research should be established in the coming few years because the first DC meters are already being developed.</i></p>
<b>Enclosures</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

\*See more information at [EMPIR website](#)  
[CEN/CENELEC website "Standards and metrology"](#)