




**Agenda item 11.2.2:**

**Project proposal**

**New Recommendation**  
*DC electricity metering*

## Annex C.2 to OIML B 6-1: Proposal for a new project

	Proposal for a new project			
	Within:	TC	12	SC
	Date:	07 Aug 2023		
Proposer(s) (Add line if required):				
Name: Katya Delak		Country: US		Organisation: NIST
Proposed convener(s)*:				
Name: Katya Delak		Country: US		Organisation: NIST
Type of proposed publication:	<input checked="" type="checkbox"/> New		<input type="checkbox"/> Revised	
<input checked="" type="checkbox"/> Recommendation <input type="checkbox"/> Document <input type="checkbox"/> Basic <input type="checkbox"/> Vocabulary <input type="checkbox"/> Guide				
Title of proposed publication: DC Electricity Metering				
DC Electricity Metering				
Terms of reference of the project, including detailed time frame in accordance with the provisions specified in B 6-1, 6.2:				
<p>Scope: The project aims to develop a direct current (DC) metering standard (recommendation) that specifies metrological and technical requirements for such devices in revenue applications. The standard would establish performance criteria for such meters, and requirements to be applied in type approval, verification and reverification. Accuracy class designations, rated operating conditions for current and voltage, environmental tests and electromagnetic compatibility (EMC) tests are to be included.</p>				
<p>Timeframe:</p> <ul style="list-style-type: none"> <li>• 1WD to be provided in 1Q2024, allowing for 3 months' comment. The convener anticipates that, because this is a new recommendation in a developing sector, more than one WD will be necessary to come to a preliminary consensus prior to developing a 1CD.</li> <li>• Subsequent WDs to be issued at a pace of one to two iterations per year, with 3-month comment periods following issuance and distribution of comments within 3 months of comment deadline period.</li> <li>• The convener will strive to issue a 1CD following the 3WD iteration, targeting this for the 2026 timeframe.</li> <li>• 2CD and subsequent CIML vote would consequently fall within the 2027 or 2028 timeframe, optimistically.</li> </ul>				
Why should the OIML develop this publication?				
<p>This proposed recommendation builds on the work of TC 12/p 1, specifically the document R 46: Electricity Meters. The revision of R 46 was initially intended to incorporate DC electricity metering, but following the most recent meeting of the PG, the consensus was that the content would be better suited to a separate recommendation. This proposal seeks to develop content specific to DC electricity metering in a parallel manner to what is found in R 46 for AC electricity metering.</p>				
<p>At present, the market for DC metering is emerging, with applications largely related to electric vehicle charging and some renewable installations. OIML G 22 allows the use of a separately approved OIML meter in EVSEs. While this currently applies for AC meters, an appropriate recommendation for DC meters would enable this option and also provide metrological standards for DC meter manufacturers to design and manufacture these devices.</p>				

Existing DC meters vary considerably in quality and accuracy, requiring utilizers' due diligence to assess which meters meet the needs for their applications. While early technical standards for DC meters have emerged, work towards an OIML recommendation would facilitate international harmonization.

Countries/Economies known to, or intending to apply this publication, if applicable:

Australia, Netherlands, US

Relevant associated OIML publications:

R46, G22, D31, D11.

List of appropriate liaisons and their work related to this proposed project (include supporting documentation as necessary and reference it here):

ANSI, wherein ANSI C12.32 provides a DC metering standard upon which to base the work of this recommendation.

IEC, wherein IEC 62053-41:2021 Static meters for DC energy also provides foundational material for this recommendation.

CENELEC, wherein EN 50470-4 is relevant.

\* As the OIML Member(s) of the Country(ies) holding the convenership of this project, I/we recognise the importance of TC/SC/PG secretariat/convenership work and will make available the resources to ensure the work on the publication is completed in a timely and professional manner in accordance with the provisions in OIML B 6-1 and the detailed time frame as part of this proposal.

Signature(s): Katya Delak, 07 August 2023

