

WELMEC e.V. – update 2nd half of 2023

Pavel Klenovsky, WELMEC Chair (Czech
Metrology Institute)

RLMO Round Table meeting – September 26, 2023

Targeted amendment of MID

- on May 24, 2023 WELMEC was approached by European Commission DG GROW whether WELMEC would be able to develop a **fast-track targeted amendment of MID** by the end of October 2023
- this has nothing directly common with the **fit-for-purpose project** outsourced to consortium led by CSES Ireland. WELMEC Chairmanship has decided to accept this challenge.
- to this end a **white paper** has been prepared by ExBo on fit-for-purpose of the EU metrological directives
- WELMEC ExBo has decided to respond positively to the quest by the EC and immediately has set to work

Targeted amendment of MID

The specification given to us by the European Commission:

- *the set of essential requirements **e-vehicle charging stations** should meet;*
- *the set of essential requirements **hydrogen refilling stations** for motor vehicles should meet;*
- *if the requirements of MID Annex V. on **electrical energy meters** and the **corresponding requirements in Annex I.** should be modified taking into account technological development, new uses and the roll-out of **smart meters**, and if yes, how;*

Targeted amendment of MID

Structure of the drafting groups:

- **Annex I (Essential requirements) - draft group:**

Pavel Klenovsky (CZ), Wilfried de Waal (NL), Matej Grum (SI)

- **MI-002 Gasmeters** – to add requirements for flowmeters for energy gases (hydrogen, biomethane) - **draft group:**

Christophe Brun (LNE France), Daniel Schumann (PTB, Germany), Wim Volmer (RDI, the Netherlands), Kurt Rasmussen (Force Technology Denmark, convenor WG11)

- **MI-003 Active electrical energy meters** – to change the title to “Electrical energy meters” and to subdivide it to 2 parts: AC electrical energy meters (ideally to add reactive power) and DC electrical energy meters - **draft group:**

Christian Mester, (METAS, Switzerland), Grega Kovacic, (MIRS, Slovenia), Matthijs van der Wiel, (Authority for Digital Infrastructure, The Netherlands), representative of manufacturers: Sebastian Mathar (ChargeUp Europe)

Targeted amendment of MID

Structure of the drafting groups:

- **MI-004 Thermal energy meters (cooling) - draft group:**

Miroslava Benková – CMI, Czech Republic, Wim Volmer - the Netherlands, Sebastian Baack - PTB, Germany

New instruments specific annexes:

- **Measuring systems for the continuous and dynamic measurement of quantity gaseous fuels** - to include dispensing stations for CNG and hydrogen (HRS – hydrogen refuelling stations) based on OIML R 139 - **draft group:**

Kurt Rasmussen, Denmark, Christophe Brun, France, Tobia Nickschick, Germany, Wim Volmer, Netherlands, representative of manufacturers: Martin Johansson, CECOD

Targeted amendment of MID

Structure of the drafting groups:

- **EVSE (EVCE) for electromobility**

Draft group:

Christian Mester, (METAS, Switzerland), Grega Kovacic (MIRS, Slovenia), Matthijs van der Wiel (Authority for Digital Infrastructure, The Netherlands), representative of manufacturers: Sebastian Mathar (ChargeUp Europe)

Targeted amendment of MID

The way forward agreed by the ExBo is:

- By **September 15**: to finish the drafts of all the parts of the proposals by the drafting groups and to send it to the ExBo;
- By **September 19**: ExBo will discuss and review all the proposals;
- **September 28**: a webinar for the WELMEC community where representatives of all the drafting groups should present the proposals and to give a thorough explanation of the background (to facilitate any discussions afterwards);
- **October 25**: on-line **WELMEC Extraordinary Committee meeting** – based on comments received after the webinar the whole proposal will be submitted to the Com for discussion/polling/acceptance. If consensus cannot be made then the whole draft will be forwarded to the European Commission with a list of the Members who voted in favour or against + election of new members of the ExBo, to raise the secretariat fees by 20%

Associated technical work

- New Ad-hoc WG of the Committee established to discuss legal aspects of charging infrastructure in Europe from the view point of metrology:
 - a project running parallel with the targeted amendment initiated by the German Delegate in WELMEC
 - the results should be used for the targeted amendment as well
 - the discussion is quite fragmented, obviously most advanced ICT tools will be used here which logically will exert pressure on legal metrology regulation
- New WG on digital transformation – ToR approved, the registered members will be called upon to propose a Convenor of the group to be approved by the Committee

Scope of the amendment

- the **scope is quite limited** - only changes firmly linked to the specification + obvious errors in MID + absolutely urgent changes, especially in support of other EU legislation
- the **modular approach** could not be squeezed into the proposal
- **download of software** is now on board (using provisions from D 31)

Download of software

8.6. Updates of software critical for metrological characteristics without an immediate reverification is allowed under the following conditions:

- the new version of the SW has been duly certified (*as an addition to the TEC of the given measuring instrument*);
- the legal metrology authorities touched by the download are duly notified;
- metrologically important parameters remain unchanged;
- no hardware seals need to be broken;
- the software updated is logged in an audit trail with sufficient information;
- the audit trail giving the history of SW updates is not erased during the operation.

Explanation: This is a pervasive unsolved problem which might be considered to be exclusively associated with MIs in use but due to the fact that it is preceded by a change in TEC it is de iure an operation of conformity assessment under EU legislation. Manufacturer associations have often criticized that arrangements as to download of new SW are vastly different in the Member States. European Commission DG GROW has expressed a view that it is a serious barrier to trade on the Single Market to be urgently solved.

The core provision

10.1. A measuring instrument shall:

- be fitted with a metrologically controlled display, scale, readout and/or printer accessible without tools to present the relevant data and/or
- be capable to present the relevant data on a metrologically controlled remote display accessible without tools and/or
- be capable to easily present the data via metrologically controlled application software on the device of the user and/or consumer and/or
- be capable to easily present the data via a metrologically controlled channel.

The instrument specific annex shall specify the need for a local display.

The measurement result presented by any of the four methods above serves as the basis for the price to pay where applicable.

Art. 10.1. is a key part of the revision taking on board recent state-of-the-art in the ICT technology in application to measuring instruments, especially to smart metering systems. It provides for a wide range of options for manufacturers to be used, formulated in the most general form.

Cooperation with EURAMET

- direct WELMEC involvement might not be a major drawback – the membership in both organizations is by 50% the same, often the same experts are members in both organizations and they in some cases submit proposals aimed at legal metrology directly within EURAMET on behalf of WELMEC, WELMEC would support selected topics by a letter of support
- October 23, 2023: joint event with EURAMET - open consultation on regulation towards the upcoming regulation call in EPM programme – one of parallel sessions will be organized by WELMEC
- both organizations together with some others in Europe from the field of standardization will join the interregional cooperation IQNet

Digital transformation – my comments

- **Remote verification:** SW can be validated remotely (with additional costs) but it cannot replace an establishment of full metrological traceability (by using a standard **on site** to check the A/D conversion)
 - covered now in OIML D31, Chapter 8, it is about remote verification of **software** only - in information about D31 the word „software“ is sometimes dropped
- **Conveying the measured data to consumers:** some new requirements now available in OIML D31 (to be approved by CIML in October 2023)
 - **electronic devices like mobiles, tablets and NBs might become an option to a display required by the EU directives**

Digital transformation – my comments

- metrological legislation should contain a provision that consumers should have the right to obtain the measured data directly from the measuring instrument
- Digital conformity assessment certificates: manufacturers mostly disinterested, however they would very much welcome if module B + modular system certificates are made available on the internet by all NBs

Essential requirements

10.4. If final customer requests it, smart metering systems shall provide readings used for billing directly to the final customer and any third party designated by the final customer and if necessary to make available suitable tools for this purpose.

Explanation: this provision is closely linked to provisions of the Electricity Directive (ED) 2019/944/EU, art. 20 and the Commission recommendation 2012/148/EU, par. 42 a), however its aim here is to avoid certifications/validations of highly changeable communication SW where always the software part on the data collector side cannot be controllable by metrological authorities. There is a consensus in our community that such an arrangement defies any certification (the part of SW on the side of the Distribution System Operators - DSO is beyond any control by metrological authorities), even under all those options in 10.1. Being an extension of what is written in ED it supports an up-take of dynamic contracts to motivate customers to save up electricity in the roll-outs of smart meters (at least in countries with a positive CBA). This can only be achieved when those customers would get the measurement data directly to their electronic devices or to their HANs, after all it is strongly supported by the Electricity Directive (ED). And after all it is beneficial to economic operators (here DSOs) as their communication systems would not be burdened by any metrological regulation. And finally, this is not a mandatory requirement, it is just “on request”. In principle, such a system is in operation in Germany – an accessory of electricity meters called Smart Meter Gateway (SMGw).



**THANK YOU FOR YOUR
ATTENTION!**

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