

Proposal to WELMEC committee: Targeted amendment of Annex V MID

presented by Christian Mester
on behalf of the individual members of the drafting group “Annex V”
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Participants in the Drafting Group Annex V

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Given the lack of consultation outside of the small drafting team, the proposal should not be seen as representing a broad consensus, the participant's employers' view or the view of a WELMEC WG.

Given the short preparation, GK, SM and MW did not see the slides.

Background: Request from the EC

[WELMEC's] help would be appreciated because you gather the expertise of national metrology institute as well as industry stakeholders.

Concretely we are looking to see your thoughts on:

- the set of essential requirements e-vehicle charging stations 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;

In this regard, it is important that the essential requirements are technology neutral, future and innovation proof in order to reflect the principles of the New Legislative Framework.

Request from WELMEC chair: Broken down into bits for different drafting groups

Structure

- Annex I (Essential requirements) taking into account the results of the Ad-hoc WG on charging infrastructure and to invite WG 7 to draft requirements for transfer of measured data to electronic devices of consumers
- [...]
- 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 (to add reactive power?) and DC electrical energy meters
- New instruments specific annexes:
 - [...]
 - EVSE (EVCE) for electromobility

Stakeholders

In the drafting group

- 1 delegate from a EV charging industry association
- 3 civil servants (legal metrology, including policy)

(But due to the time constraints, neither representing their employers nor their countries)

Not in the drafting group

- many other EVSE manufacturers (especially SMEs not member of the industry association)
- manufacturers of electricity meters for other applications
 - utility meters
 - meters integrated in heat pumps etc.
- users of electricity meters for other applications
- manufacturers/users of other types of measuring instruments affected by changes to MID, namely Annex I
- consumers
- standardisation organisations
- WELMEC, namely WG 11

Outside the scope

- Assessment of the assumptions
 - need for change of MID Annex V and Annex I taking into account technological development, new uses and the roll-out of smart meters
 - need for change of title of Annex V “Electrical energy meters”
 - need for harmonisation for reactive power
 - need for adaptation of MID for EV charging applications
- Consensus building
- Impact assessment
- Cost-benefit analysis

Key points

- Starting point of our work: Modification of MID is needed (not if)
- All requirements for electrical energy measurement stay in one single annex – no application-specific triplication (AC, DC and EVSE)
- Current controversy about whether MID provides technical details or performance requirements is mostly related to provisions of Annex I, so proposal includes suggestions for Annex I
- Legally relevant data is to be secured (by definition); also applicable when transferred outside the mechanically secured device, including storage
- M/541 does not exceed the scope of today's MID (2014/32/EU)

Reminder M/541 (1)

M/541 (issued 2015) requests

- One or more European standards containing technical specifications concerning the legal metrological control of delivery to the grid of electricity by small scale producers (households, commerce and light industry)

→ Smart meters

→ Bidirectional active electrical energy meters

→ Interval meters for active electrical energy meters

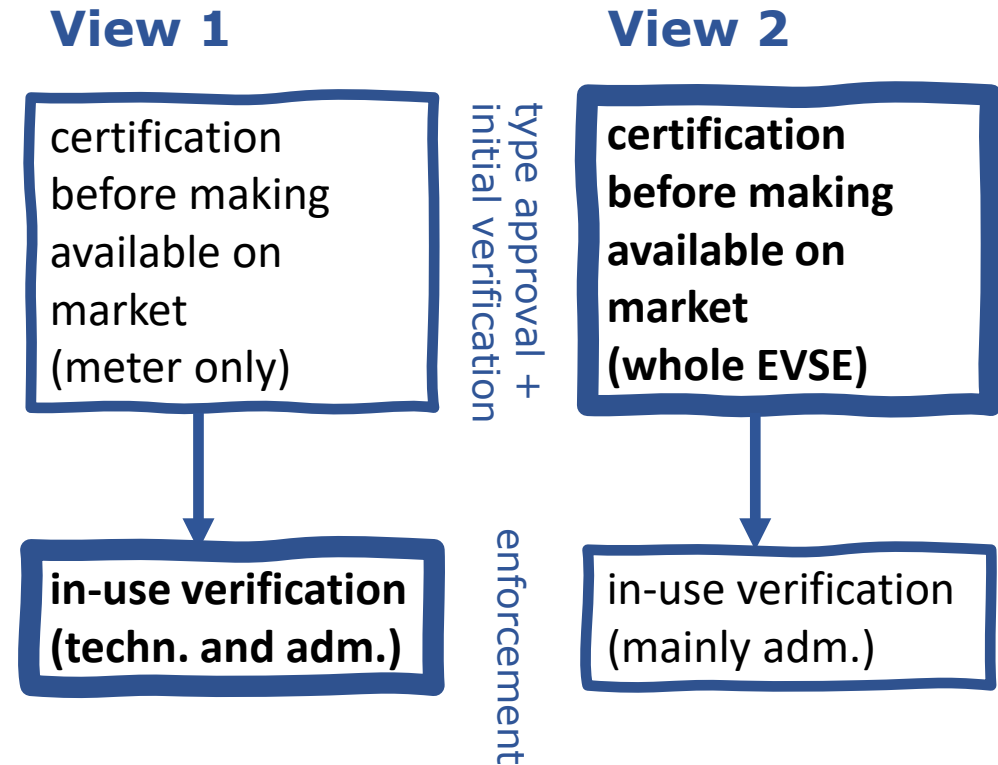
Reminder M/541 (2)

M/541 (issued 2015) requests

- One or more European standards containing technical specifications concerning the legal metrological control of delivery to the public of AC and/or DC electricity, also for onboard metering, for use in electrical means of transport
 - AC active electrical energy meters
 - DC active electrical energy meters
 - for delivery of electricity for use in electrical means of transport
 - for onboard metering (important for inductive in-motion charging)

Two views of metrology legislation for energy measurement in EV charging applications

- aim: set up a system of trust in measurement
- trust ensured by **certification before making available on market** and **in-use verification**
 - - with different emphasis on each phase
- first outcome of WG11/SGe/dg3: many of the requirements in MID Annex I and Annex V are **suitable** and **applicable** to the case of EV charging



Proposed changes (without broad consensus)

- Remove “active” in “active electrical energy”
 - includes reactive electrical energy
 - includes apparent electrical energy
- Allow design of meters for upper temperature limits $> 70\text{ }^{\circ}\text{C}$
- Define additional class: Class D
- Remove overly specific content
- Remove redundant requirements
- Fix inconsistent phrasing

Current status

- Consultation in WELMEC WG 11
- Circulated in standardisation groups

First feedback from WG 11 (after a few days)

- Very controversial among WELMEC members

Comments received so far (not representative, no consensus so far)

- Class D not relevant for current scope of MID (residential, commercial, light industry), but MID could be expanded to heavy industry.
- Strongly in favour of proposal (technology neutrality!).
Annex I point 10.1 should read “The result of the measurement shall be indicated”. Point 10.5 should be removed.
EVSE should not have a separate, application-specific annex.
- EVSE should have a separate annex.

First feedback from industry (after a few days)

- Application-specific annexes would have required frequent updates to allow new technical solutions one-by-one. Perhaps once a year? Would just the European Commission have been on the critical path or also the Parliament and the Council?
 - Frequent updates are highly undesirable. Would need to look for updates at all time. Updates are very expensive.
 - Why should EVSE be considered as a measuring instrument when the measuring function is already covered by MID? It will be no better for the consumer.
 - Is there anything wrong with putting technical specifications into harmonised standards?
 - MID should remain technology neutral and open to technological progress. It works well.
 - Technology neutral MID allowed for cost reduction of about 50 % for our AC EVSE in recent years.
 - Current MID protects honest industry (manufacturers and users) as well as consumers against unfair competition. Nobody wants to end up in the tabloid press anyway.
 - Stable legal framework is required for innovation (especially for SMEs).
 - Delegated act (very targeted) is welcome.
 - Remove the restrictions on the temperature limits: Allows more energy efficient design of products for outside applications, e.g. EVSE (cooling is not energy efficient, industry should be allowed to design meters suitable for higher temperatures)
 - Remove overly specific and contradicting requirements on rated operating conditions
 - Red tape? Need to analyse whether this broad proposal for a large-scale revision of MID causes administrative overhead (changes to documents) or worse.
- Broad consultation, thorough impact assessment and cost-benefit analysis required.

First feedback from industry (after a few days)

- Need to study carefully if product redesign and/or recertification is required.
→ Broad consultation, thorough impact assessment and cost-benefit analysis required.
- Need to have a closer look to see whether there is any benefit (beyond what could be done in a delegated act).
→ Broad consultation, thorough impact assessment and cost-benefit analysis required.
- But didn't M/541 indicate that
 - AC is in
 - DC is in
 - EV charging applications are in
 - Smart meters are in (Annex I Table 1 point 2)
 - and since MID is technology neutral for electricity, is there any reason why it is to be read differently for gas?
Hydrogen fuel stations and EV charging depend on the same questions:
 - Are Annexes IV and V limited to utility applications?
 - Are Annexes IV and V limited to specific technical solutions (AC or DC, old or new gases)?
- Broad consultation, thorough impact assessment and cost-benefit analysis required.
- Need to check whether changes beyond a delegated act affect all users of MID (manufacturers, users, ...)
(even if their instrument-specific annex is not changed and no application-specific annex is added and affects them).
- Broad consultation, thorough impact assessment and cost-benefit analysis required.

First feedback from industry (after a few days)

- Annex I: Need to check implications of proposed changes. Look very well intentioned, but seem liable to invertedly limiting technological progress to today's state-of-the-art. Today's Annex I seems more technology neutral and in line with NLF principles.
 - Annex I: Is there political and legal support for increasing the level of technical details? Are we going back to old approach?
 - Annex V: Much of it looks like beautification. Is it worth destabilising the industry and consumers for this?
- Broad consultation, thorough impact assessment and cost-benefit analysis required.
- Annex V: Rated operating conditions, including temperature limits, could probably be opened for technical progress in a delegated act without side effects.
 - Will there be a proper consultation (including all users of MID, not just electricity and gas)?
 - Money spent for compliance with changed MID will not be invested for Green Deal and digital transformation (better alternative fuels infrastructure, smart meters etc.)
 - Our main fears: much higher cost, much longer time to market, survival of SMEs, preventing integration (integration is the most efficient way of bringing the cost down), innovation will be blocked if technical specifications put into directive.
 - Ultimately, consumers will have to pay for the cost of the measuring instruments, including compliance cost / red tape.
- Risk assessment needed: Financial cost and acceptance of Green Deal and digital transformation?

Summary

- We are far from a consensus.
- Limited feedback from industry so far (within a few days). Preliminarily trends:
 - Delegated act to fix provisions on rated operating conditions could be an option
 - supporting Green Deal and digital transformation → important societal goal;
 - maintaining protection of consumers and fair trade at today's high level → no political opposition expected;
 - avoiding harmful side effects → open more doors to innovative solutions without increasing cost to anyone → not controversial.
 - Targeted amendment with broader scope, touching Annex I (and all instruments)
 - might be controversial;
 - might be perceived as a financial burden with unclear benefit (since not justified by any problem with present MID);
 - might make innovation more expensive and complicated;
 - might make consumer protection less efficient;
 - might slow down Green Deal and digital transformation, increase costs and reduce support.
 - Recommend targeted amendment to be based on
 - broad consultation;
 - thorough impact assessment;
 - cost-benefit analysis.
 - Not keen on increasing level of technical details (like in the old approach, Council Directive 76/891/EEC).

→ Need for discussion



**THANK YOU FOR YOUR
ATTENTION!**