

Brussels, 26 May 2021

RE: ChargeUp Europe calls for European Commission clarification on applicability of Measuring Instruments Directive (MID) to active AC and DC electrical energy meters

Introduction

The members of ChargeUp Europe would like to express our support for the work of DG GROW's **Working Group Measuring Instruments (E01349)** which is seeking stakeholders' views on the technical requirements for DC hardware for electricity measurement when charging an electric vehicle (EV).

In this regard, we are writing to you in relation to an urgent need to clarify that the **MID is applicable to active AC and DC electrical energy meters**.

Why is the application of the MID currently a hurdle for the e-mobility?

E-Mobility will play a critical role in the decarbonisation of Europe's transport sector and in reaching the EU Green Deal aim of carbon neutrality by 2050. To make this a reality, it is vital that a harmonised EV charging infrastructure market is created in Europe which makes driving and charging seamless across Europe.

In 2004, when MID was passed, there were almost no charging stations erected in Europe. The market started with mainly AC charging stations that partly contained MID meters known from household appliances, meaning that those AC chargers were manufactured and certified under MID. A decade later, in 2014, the Alternative Fuels Infrastructure Directive was passed and Member States started applying metrology law to the meters inside the EV chargers and the chargers themselves, e.g. Germany in 2015. Fast charging was evolving but commercial DC meters designed for fast chargers were not available back then.

Today, there currently exists discrepancies and a lack of clarity regarding certain rules and technical requirements for EV charging, including in the area of metering and the application of MID to both AC and DC electrical energy meters.

The need for clarification

Since 2004, MID (Directives 2004/22/EC and 2014/32/EU) defines performance requirements for the measurement of active electrical energy for the "protection of consumers, levying of taxes and duties and fair trading" (Art. 3 MID 2014/32/EU). By definition, the term active electrical energy includes both AC and DC ("electrical energy transformable into some other form of energy").

While it is clear that in 2004, all measurements of active electrical energy relevant for the "protection of consumers, levying of taxes and duties and fair trading" were using AC technology, this does not exclude DC active electrical energy meters once DC technology is used in such transactions.

Regarding the MID requirements and all relevant standards from CENELEC, IEC, OIML and WELMEC as well as electric vehicle supply equipment (EVSE) application standards¹ we understand that all MID requirements (environment, EMC, accuracy, reliability) can either be applied just as for AC meters or are not applicable by definition.

¹ Which gives inputs about low-frequency EMC requirements and overcurrents

No MID requirements exclude the use of DC active energy meters. Furthermore, the essential requirements of MID are complete and applicable for both AC and DC active energy meters in the sense that no essential requirement that an active energy meter can be reasonably expected to comply with is missing from MID.

As shown above, the legal and technical situation seems clear beyond any doubt and notified bodies also carry out conformity assessments for both AC and DC active electrical energy meters. However, some Member states contemplate introducing non-harmonised requirements for active electrical energy meters if DC technology is used.

Certification

This lack of consistency would fragment the EU market through technical barriers to trade, leading to an increase in cost and time to market for DC fast charging stations: A DC charger would need multiple certifications by nationally nominated bodies, each taking from several weeks to months for approval.

If we simplify and assume certification cost and time spent of 50 000€ per vendor and an effort of 15 vendors in 27 Member States, the financial cost of these technical barriers to trade reaches €20m for product compliance alone (not taking into account indirect changes e.g. alterations on charger design, production lines, and certifications of systems for ingress protection and so forth). This launch could not be synchronised in markets because of different time spans for certification.

Moreover, if the non-harmonised requirements differ from MID or each other, the technical design of DC chargers would have to be specifically adapted to the respective Member State's non-harmonised requirements, further increasing the cost. The industry's success also depends on the acceptance of the consumer, to which appropriate protection is essential. Therefore, it is highly undesirable to have varying levels of protection of the consumer across the EU. Non-harmonised requirements of different technical content will lead to such a situation.

At present, the industry is directly exposed to the legal uncertainty caused by non-harmonised requirements within the scope of MID. Consequently, it is delaying investments into the charging infrastructure, namely the DC chargers which already today have capacities ranging from 15 kW to 450 kW, deployed on both private and public sites and which are so important for the transition to a carbon-free mobility and thus the Green Deal.

Market development

On top of these issues, there are other barriers where clarity is needed in order to provide clear direction for the market.

Clarity should be provided on the range of MID certified DC meters - if one DC meter is certified this does not automatically mean that all DC charging systems can be updated, for example, because of the DC power range of the DC meter and/or the space restrictions in the charger. Next to that it should be outlined that having a certified DC meter doesn't need the full charger to be certified. Isolating the DC meter from the charger by sealing that specific component can be a solution, as long as there are sufficient authorized personnel to work with it.

Regarding retrospective requirement of DC metering, clarification is needed on whether it is expected to update systems already in the field that physically do not have the space to add a DC meter. One can think of a date until when chargers can be installed without DC meter. This clarity enables investments in the upcoming years, as the cost of DC meters in both investments as operational expense is not yet clear.

The development of a functioning EU market for DC charging systems with DC meter cannot occur as long as there is only one manufacturer (of DC meters) certified and if there is a risk of lack of

components needed for the steady supply of DC meters. Stimulating the development and MID certification of DC meters beforehand can be a measure to overcome this.

Furthermore, legal certainty should be provided regarding the application of existing national accuracy metering certification laws beyond the scope of MID across Member States. We recommend recognising that the certification of DC metered chargers in one EU Member State (where such law exists) is valid in all European Member States.

Request for formal confirmation

We would welcome a clarifying statement from the Commission that active electrical energy meters are within the scope of MID, regardless of whether AC or DC is used and on the other points raised in the letter.

Only in this way will the European consumer be protected uniformly in all Member States. This is especially important for charging of vehicles, which are made to travel across borders. For industry, such a clarification will provide much needed legal certainty, enabling them to speed up investments.

In the broader context of the decarbonisation of EU road transport and the shift to e-mobility, such a clarification will help to create a truly single EV charging infrastructure market in the EU, speeding up the transition to zero emission transport.

We would be very happy to meet with you to discuss this issue in more detail. Thank you in advance for considering our request and we look forward to hearing from you.

Yours Sincerely

ChargeUp Europe Secretariat



About us

[ChargeUp Europe](#) is the voice of the electric vehicle (EV) charging infrastructure industry. ChargeUp Europe has been formed to accelerate the switch to zero emission mobility and ensure a seamless driver experience with access to high quality, readily available charging infrastructure across the EU. As of today, our member companies represent over 300.000 charging points in all 27 Member States.

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