

Collated Comments after Webinar 28 September about Draft Annex MI-002 Gas meters

	By	Current Reading	Proposed Reading	Remarks / Rationale	Response
1	ESMIG (Sagemcom)	Introduction of new accuracy class 0,5	Remove class 0,5	The great majority of gas meters are compliant with the Class 1,5 or below. So, <u>we don't think that adding now the class 0,5 is relevant</u>	Rejected Class 0.5 is a request from D&TSO and industry The limit between light industrial and industrial varies a lot per Member State. What is legally light industrial in one, can well be industrial in another.
2	ESMIG (Sagemcom)	The measurement of the calorific value	Remove	It's a very complex topic which should require the addition of very high accuracy sensors. <u>We don't think if it's a good idea to include that in the MID now.</u>	Rejected Instruments and standards already exist for D&TSO applications. EC required to include Energy measurement, which needs CV determination
3	ESMIG (Itron)	For Hydrogen change of min ratio for class 1.0 from 20 to 10 due to issues with H2 and Coriolis meters unable to fit into ratio of 20. Add article for different types of gases (NG, H2) If meter has multiple applications dependent on flow rate ranges, all shall be marked on the meter.	Leave the gas meter clause as is with the ratio of 20 and include the new ration of 10 into the specific Annex created for Hydrogen dispensers.	There are concerns that reducing the ratio might <u>open the market to low quality meters</u> . We understand the issue with Coriolis and H2 but to allow this technology (that has very minor presence in the market, especially in the residential one) to fit with new gases, we are impacting the overall meter market. Maybe the solution is to <u>include this in the hydrogen refilling stations</u> only?	Rejected Annex related to H2 dispensers is not relevant for continuous gas metering (MI-002). We could expect that market for H2 will grow in the future. It would be up to the D&TSO to define their specifications if hey need specific flowrates ranges.
4	ESMIG (Itron)	Create Part III for calorific value determining devices based on part II for conversion devices. Based on OIML R140 for CVDD with class A=1.0 and B, C=0.5%. Propose to define 0.5 and 1.0	Remove	<u>Too high accuracy for residential applications.</u> Need to reject as high accuracy is out of the scope of MID as only used for T&D and Industrial applications.	Rejected We don't expect fiscal CVDD application for residential metering.

		in the same format as gas meter accuracy classes.			
5	ESMIG (Itron)	Enlarge annex IV to all gases	Need to consider a discrete list of gases (Fuel, CO2, H2)	<u>This is too general</u> and needs to only be specific for the types of gases that we are likely to be using, as removing "fuel" opens the door to an unintentionally much to wider scope. <u>Leave fuel gases and spell out CO2, H2 and other gasses that may be needed.</u>	Rejected It does not seem to be an issue to enlarge scope of MID to all gases. It would avoid facing in several years another situation where a new application is not in MID Scope (development of ammonia NH3 measurement for example). Under the optionality clause Member States can choose to regulate certain applications, or not.
6	ESMIG (Itron)	Include 0.5 gas meters in MI-002	Do NOT include gas meters of 0.5% accuracy.	<u>This is not in the field of scope of the MID</u> and rather the area of T+D.	Rejected The area of MID is not the same in all countries. DSO meters are in some countries considered as Light industry meters (ie. MID meters). Even TSO meters can in some cases be MID. Ambiguity between light/heavy industry makes possible to countries to define themselves the limits of national regulations.
7	WKO (Austrian Economic Chambers)			The MID has always applied to use of household, commercial and light industrial equipment. It is therefore questionable <u>whether "Calorific Value Determining Devices" falls under this area of application.</u> Furthermore, national regulation must be taken into account. There are countries in which "Calorific Value Determining Devices" are not subject to verification requirements for placing on the market and ongoing operation. The MID cannot	Rejected MID gives possibility to countries to regulate or not measuring instruments. Definition of light industry depends on the countries (see point 6). Moreover, the EC request included making arrangements for "energy gases".

				therefore be valid for "Calorific Value Determining Devices" when they are placed on the market.	
8	WKO (Austrian Econmic Chambers)			The class 0,5 should only be valid for ultrasonic gas meters, as a "class 0,5" is not considered appropriate for other types of gas meters (applies to points 1, 2 and 4)	Rejected MID should not refer to technologies. It is not a problem that 0.5 does not refer to all technologies.
9	WKO (Austrian Econmic Chambers)	Question on "simple version"		Which devices fall under the term "Calorific Determining Devices" ?	Rejected Today chromatographs and calorimeters. But new technologies are emerging.
10	WKO (Austrian Econmic Chambers)	Question on "simple version"		It must be possible to transfer values from the "Calorific Value Determining Devices" to the "Energy Conversion Devices" via SPS (control technology)	Noted But too specific to be included in MID. If needed should be discussed in technical standards.
11	WKO (Austrian Econmic Chambers)	Question on "simple version"		Does the term "External Transducer" mean that the value can be transferred from a representative point in the network to the "energy conversion device" ?	Yes. It is the intention to describe this situation.
12	France (Authority)		it is proposed to enlarge scope of Annex IV to the whole industry (including heavy) and not only light industry. This enlargement will end national divergences about the notion of "light industry".	Light and heavy industry A new accuracy class 0,5 has been added in order to take into account needs of industry and have common accuracy classes with OIML R137. The class 0,5 is particularly useful for heavy industry.	Rejected Good proposal, which would give clarification. Actual situation allow on the contrary countries to regulate some specific application in heavy industry. Lot of comments to keep the situation as it is.
13	France (Authority)			New gases By removing the word "fuel" has been removed to integrate all the gases, particularly not fuel gas as CO ₂ .	Rejected EN standards from TC237 are intended for fuel gases. Scope of R137 is wider. National divergences already exist. Inclusion in MID will on

				This removal implied that steam and nitrogen for example are also in the scope of MID, which raises two questions: <u>Are they any need to harmonize at a European level the measuring of all types of gas</u> which are specific to some industries? Are there any existing standards to ensure the compliance of MID of all gas meters such as meters for steam meters? If not, the certification of gas meters might lead to national divergences. Moreover the impact for all industries shall be taken into account.	the contrary encourage harmonization. See point 5 If Member States choose to regulate certain applications [optionality clause] now at least the requirements are harmonised as the legal basis is not national.
14	France (Authority)		Definition proposal <i>An instrument designed to measure, memorise and display the quantity of fuel gas and carbon dioxide gas, volume or mass, and if needed energy, that has passed it</i>	Display The proposal of displaying only energy of gas meter is not relevant for the following reasons: ☐ it does not ensure the protection of consumers for which the bill is based on volume or mass; ☐ many applications only require volume or mass (H2 and CO2); ☐ standards are based on volume or mass; ☐ determination of energy is always based on volume or mass. <u>That is why energy shall be a secondary indication when needed, and not the only one.</u>	Rejected Drafting Group is encouraged to include energy metering. In final to encourage trading of energy directly. Looks more complicated to explain consumer that 2 values are displayed.
15	Finland			We do not oppose reviewing the requirements of these annexes in attempt to align them with other directives	Noted Remark to address to EC and Welmec Committee regarding fast-track process.

				regulating energy market and measurements. However, we feel that this work should be done carefully in co-operation with the energy sector specialists with full impact assessment. Without this there is a risk of conflicting or rigid regulations on issues that actually are not under the scope of legal metrology. Many issues regarding smart utility measuring instruments are currently being solved via standardisation. Considering the importance of energy sector and the potential costs caused by changing requirements for measuring instruments used in this area, we feel that a careful impact assessment, cost-benefit analysis for the industries and harmonization between other energy sector directives is necessary before making hasty changes to these requirements. We do not see how these changes could be made safely by fast-track technical amendment.							
16	Elster		Adding 2.3 For gas meters with integrated caloric determination, which only indicate energy, the following MPE apply: <table><tr><td>Maximum permissible errors on determining energy</td><td>class 1.5</td><td></td></tr><tr><td></td><td>± 3.0 %</td><td></td></tr></table>	Maximum permissible errors on determining energy	class 1.5			± 3.0 %		It should be taken into account that energy meters may have the caloric determination integrated. A new paragraph 2.3 should be defined. This table is analogue to OIML R140, paragraph 6.2 for energy measuring system; where accuracy class A (OIML	Rejected This proposal would need technical discussion which does not fit with timeline to discuss this comment. We are sorry to decline this comment which could be addressed to standardization groups.
Maximum permissible errors on determining energy	class 1.5										
	± 3.0 %										

				R140) matches class 0.5, accuracy class B matches class 1.0 and accuracy class C matches 1.5.	
17	Elster	§4.3 Innovative version with class 0,5		It should be considered that requirements are defined here for which measuring instruments (as reference meters) with sufficiently low measurement uncertainty are available. This means that an error drift of 0.25 % (class 0.5) must be measurable with sufficient accuracy.	Noted
18	NMI	3.1.1		Either only mention gas meters or include gas meter, CVDs and CVDDs	Right indeed ! Include CVD and CVDD <i>The effect of an electromagnetic disturbance on a gas meter or conversion device or calorific value determining device shall be such that:</i>
19	NMI	3.1.3		What is the critical change value of a CVDD	To be discussed with NMI
20	NMI	4.3		This allows Class 0.5 meters to have a bigger shift than Class 1.0 in the flowrate range $Q_{min}-Q_t$. Class 0.5 shift for flow-rate $Q_{min}-Q_t$ should be limited to 0.5% max or use: The variation of the measurement result after the durability test when compared with the initial measurement result shall not exceed half of the MPE in point 2.	To be discussed with NMI
21	Norway			Simple version : Appropriate Innovative version:	Noted Innovative version brings some clarification and include new request from users.

				Expansion s of the scope that are not investigated. Should not be part of the fast track.	
22	Farecogaz	NA, missing provision	Add a provision such as: “7. Inscription on gas meter subassemblies: In case of multiple parts approved within the same instrument, e.g. a gas meter with volume conversion and integrated CVDD, all the specific accuracy classes shall be inscribed on the meter plate”	This is a new issue created by part III CVDDs which have different accuracy classes (while part II does not include MPEs distinction per accuracy class). Please note that the section “Inscription on” is already present in the Thermal Energy meter, while the prescriptions of Annex I section 9.1 seem not to exclude having multiple accuracy classes on the same instrument	Rejected This proposal would need technical discussion which does not fit with timeline to discuss this comment. We are sorry to decline this comment which could be addressed to standardization groups.
23	Farecogaz	No accuracy class higher than 1 is present for CVDDs (e.g. 1.5 or 2), while similar instruments are available	Add accuracy class 2 for CVDD with MPE $\pm 2\%$ We know that such classes do not exists in the current technical standards for CVDDs but the standards have been developed before the introduction of new gases and their CV variations.	One of our members has developed, for residential use mainly, a CVDD with an accuracy of $\pm 2\%$ and would like to have the possibility to MID approve it. It could help to monitor CV trends on the measuring points, especially in case of biomethane injection. This device could also be used without a MID approval but, as for many submetering applications, the MID approval helps guaranteeing high quality	Rejected This proposal would need technical discussion. DG proposal is based on actual R140 requirements. These instruments with MPE 2% are intended for monitoring rather than for fiscal use. See point 4
24	ACISM (Italy)			Energy Conversion device ☐ Errors are not specified clearly: which is the computation? Is energy system error given by square root of errors summation ? We propose to express it clearly	Rejected “Energy conversion” is actually a basic calculation (Volume x Calorific Value). There is not really a measurement and we made choice to consider there is no need to define MPE for energy calculation.

	By	Current Reading	Proposed Reading	Remarks / Rationale	Response
	Definitions				
2	FR/GRTgaz	« Light industry » concept is not defined and needs interpretation for MID application. Are delivery points Transport/Distribution (city gates) covered or not ? In Europe most TSO apply MID (in gas transport).			Discussed during DG meetings. There is no request to formally extend MID to heavy industry.
30	CH/METAS	Removal of "fuel" in "fuel gases"		The extension to "gases" instead of "fuel gases" seems delicate since parties become affected that are not usually within the scope of MID. A careful risk analysis / cost-benefit-analysis is encouraged. Gases other than fuel gases seem unlikely to be relevant in residential, commercial and light industry applications.	Noted
3	FR/GRTgaz	Definition Gas meter An instrument designed to measure, memorise and display the quantity of gas (volume, mass <u>and/or energy</u>) that has passed it.	In that case, conversion functionalities are included in the meter.		Modification of gas meter definition regarding metered quantities. And adding energy units in Part I. No need for further modification to include conversion functionalities in gas meters. It already exists.

27	Farecogas	Part I: in line with comment #3 by FR/GRTgaz, it would be nice to allow potentially the existence of a single device able to measure Energy. Why not adding in section Units in part I, as well <i>“or in Joules or in Kilowatt-hours”</i> ?			Accepted Joules and watt-hours added in metered quantities units
20	NL/NMI	Definitions gas meter, “...memorise and display”		We need to be critical on the use of these words, depending on the final version of Annex I in relation to 'remote read-out'	Memorization and display functionalities will be treated with Annex I. No impact expected on gas meter definition.
1	NL/RDI	Energy Conversion device: A device which calculates, integrates and displays energy using volume at base conditions and the calorific value or the gas composition	Energy Conversion device: A device which calculates, integrates and displays energy using volume at base conditions or mass and the calorific value or the gas composition	It should be possible to determine energy content from mass measurement (sorry for not noticing earlier).	Accepted
4	FR/GRTgaz	Definition Energy Conversion device A device which calculates, integrates and displays energy using <u>volume at base conditions</u> and the calorific value or the gas composition	Use word “quantities” for volume or mass		OK with comment Rather prefer to mention “volume or mass”
5	FR/GRTgaz	Definition Energy Conversion device A device which calculates, integrates and displays energy using volume at base conditions and the <u>calorific value</u> or the gas composition	Use Superior/ Gross calorific value		Accepted Gas composition removed since energy calculation is always made with CV, wherever the calculation of CV is made (in CVDD or in ECD)

21	NL/NMI	Definitions energy conversion device		The CVDD (transmitter) has been described in Part III. However, the Energy conversion device (Calculator and indicator) is not described. In comparison to the Volume conversion device this is the other way around. Here the calculator and indicator is described (EVCD) and the transmitter is not (P & T transmitters). It is a good addition to include the CVDD, however the Energy conversion device should be included into Part III as well.	It is intended that Energy Conversion Device is included is part II which covers all conversion devices. Discussed with NMI on 31/08/2023 Can be abandoned
28	Farecogas	Part II: to avoid confusion it would help indicating that the <u>MPE of part II is applicable only to Volume Conversion Devices</u>, while for Energy Conversion Devices we could skip any indication. For ECDs, I guess the relevant product norm will apply if ever it will be harmonized with the MID (e.g. a future EN12405-2)			Accepted Adding "MPE for volume conversion devices" in part II §9
29	Farecogas	Part II: the <i>Energy Conversion Device</i> is present only in the definitions and not in the body of the document. This could cause some confusion, see point 2 above			Discussed No change needed Part II covers all conversion devices

22	NL/NMI	Definitions energy conversion device, "... displays..."		We need to be critical on the use of these words, depending on the final version of Annex I in relation to 'remote read-out'	
	Part I				
6	FR/GRTgaz	§1.1 Relation between Q_{max}/Q_{min} and Q_{max}/Q_t should not be related to accuracy class but to du compteur mais à sa dynamique de mesure. (see OIML R137 §5.2)			
23	NL/NMI	Table 1.1, for class 0.5 $Q_{max}/Q_t > 5$	$Q_{max}/Q_t \geq 5$	Using $>$ instead of $\geq$ triggers a possible situation $Q_{min} > Q_t$. The best solution is to use $\geq$ for both cases, which will allow for $Q_t = Q_{min}$. This aligns with documents like OIML R 137. NL/NMI If you would set Q_{max}/Q_{min} to >5, you will create certifications where meters will be certified for 5.1	Sign $\geq$ is actually used Maybe a misunderstanding due to markings in Word. Actually there is a small error of typing "> underlined" instead of "$\geq$"
33	CH/METAS	Dynamic range		The changes to the dynamic range requirements potentially reduce the level of consumer protection. It should be demonstrated how unintended drawbacks are avoided or mitigated.	Noted To be argued with some relevant data
7	FR/GRTgaz	§1.1 Class 1.0	Wish to keep 20 for class 1 rangeability		Needed for specific application for hydrogen. Based on request from manufacturers.

		Rangeability 10 is too small regarding what is observed on gas network.			We'll keep as it is. A more innovative proposal for MI-002 1.1 will be discussed in Welmec WG11.
8	FR/GRTgaz	§1.1 Class 0.5 Same remark Moreover, class 0.5 certified meters are US meters with rangeability > 50	Wish 10 for class 0.5 rangeability		Noted We will try to work on a proposal to split accuracy class and rangeability
32	CH/METAS	Introduction of a new accuracy class 0,5		The benefit of introducing class 0,5 should be demonstrated. The new class will have implications on in-use inspection that can be costly and will, one way or the other, have to be paid for by consumers.	Noted
9	FR/GRTgaz	§1.4 <i>A minimum temperature range of 50 °C for the climatic environment.</i> This range should be enlarged to include climatic change	Enlarge to 60°C		Difficult to change this proposal which apply also to household meters. Not accepted
10	FR/GRTgaz	§3.2 3.2. <i>Effect of upstream-downstream flow disturbances Under installation conditions specified by the manufacturer, the effect of the flow disturbances shall not exceed one third of the MPE .</i>	For class 0.5 effect should be below ½ MPE		Not accepted Since 1/3 is mentioned in OIML R137. Where does this request come from ?
24	NL/NMI	4.3.1 <i>The variation of the measurement result after the</i>	The variation of the measurement result after the durability test when compared with the initial measurement	The actual text allows Class 0.5 meters to have a bigger shift than Class 1.0 in the flowrate range Qmin-Qt.	R137 and MID are not coherent for class 1.0 on that point

		<i>durability test when compared with the initial measurement result for the flow rates in the range Q_t to Q_{max} - shall not exceed the measurement result by more than 0.25 %.</i> 4.3.1.1 <i>The error of indication after the durability test shall not exceed the MPE in point 2.</i>	result shall not exceed half of the MPE in point 2.	Class 0.5 shift for flow-rate $Q_{min}-Q_t$ should be limited to 0.5%.	Class 0.5 requirement is OK with R137. Change 0.25 % > $\frac{1}{2}$ MPE (which is the same)
30	CZ/CMI	In OIML R137 there is written: 11.1.2 Uncertainty <i>When a test is conducted, the expanded uncertainty¹ of the determination of errors of the measured gas quantity shall meet the following specifications:</i> • <i>for type evaluation : less than one-fifth of the applicable MPE;</i> <i>However, if the above-mentioned criteria cannot be met, the test results can be approved alternatively by reducing the applied maximum permissible errors with the excess of the uncertainties. In this case the following acceptance criteria shall be used:</i> • <i>for type evaluation : $\pm (6/5 \cdot MPE - U)$</i>	So my opinion is that it will be difficult of test gas meters of class 0.50 with uncertainty $U(k=2)=0.10\%$		What is the problem for MID MI-002 exactly ?

36	CZ/CMI	I think that each accuracy class should always have a clearly defined minimum range of $Q_{max}:Q_{min}$ and $Q_{max}:Q_t$. Class 1.5 should have $Q_{max}:Q_{min}$ of at least 150 and $Q_{max}:Q_t$ of at least 10. Class 1.0 should have a $Q_{max}:Q_{min}$ of at least 20 and a $Q_{max}:Q_t$ of at least 5. Class 0.5 should have $Q_{max}:Q_{min}$ at least 10 and $Q_{max}:Q_t$ at least 5. Allowing a $Q_{max}:Q_{min}$ of at least 10 for Class 1.0 will result in rotary and turbine gas meter manufacturers not being forced to produce higher quality gas meters with a larger $Q_{max}:Q_{min}$ range. For example, MicroMotion (Coriolis gas meter) is now approved in class 1.0, so I see no reason to allow a smaller range than $Q_{max}:Q_{min} = 20$ for class 1.0 just because other manufacturers cannot make it. In general, meter requirements should be tightened to make meters more accurate and with a larger measuring range, rather than the opposite. I admit and am aware that			OK of course to define a clear ratio Q_{max}/Q_{min} Problem is to cover uses for gas meters different from usual natural gas operators. Especially for H2 applications, ratio >20 seems hard to achieve
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		I am not a great expert in direct measurement of hydrogen.			
	Part II				
11	FR/GRTgaz	8 MPE Conversion devices MID should define an accuracy class for heavy industry devices	Define an accuracy 0.3 % for conversion devices PTZ in reference conditions. And 0.5 % in rated operating conditions		Noted But doubt on the fact that 0.3 class is achievable (see discussion in R140 revision work)
35	CZ/CMI	I suggest that the section "PART II , SPECIFIC REQUIREMENTS , CONVERSION DEVICES" should state that these are requirements for both " <i>gas volume conversion devices</i> " and " <i>energy conversion devices</i> ". In the past it was only for ' <i>gas volume conversion devices</i> ' and this is not clear from the proposed wording that " <i>energy conversion devices</i> " are included. I would also make the comment in this article : <i>It is expected that the additional calculation of energy, i.e. "volume at base conditions" multiplied by "superior [gross] calorific value", does not change the performance of the conversion.</i>			I understand your point. It would bring clarification. But I am not sure that the word "expectation" fits with writing requirements in a directive. It is more likely a wording for normative document.
37	CZ/CMI	Is it really necessary to require an ambient humidity value of			Up to now we haven't discussed about modification

		60 % ± 15 % in the "MPE for volume conversion devices" section? What would be influenced if a relative humidity is lower than 45%? Some laboratories use hygrometers with a measurement uncertainty of U(k=2)=10%, so this requirement seems too strict. Personally, I would suggest "ambient humidity less than 75%" in this section.			for current requirement in VCD.
26	NL/NMI	Part II A conversion device constitutes a sub-assembly when it is together with one or several measuring instruments with which it is compatible.		Add definition to the table.	To be confirmed if it is needed
31	CZ/CMI	I am missing requirements for energy conversion devices for example tables 4 and 5 from EN 12405-2.			There is indeed no specific requirement defined for energy calculation. We are expecting that additional calculation of energy (Vb x Calorific value) does not change the performance of the conversion.
	Part III				
34	CH/METAS	Energy Conversion device		The intention behind the harmonisation of requirements for energy conversion devices for	Agree with Metas comment regarding today situation. But we would like to open to future evolution of the gas

				residential, commercial and light industry use is obvious. <u>Nevertheless, we are not convinced that energy conversion devices are relevant in the given scope.</u> We expect them to be used in grid applications, e.g. in the supply of an entire village. This is outside the scope (residential, commercial and light industry use) and requirements for energy conversion devices used in this way will not be harmonised by the proposed modification.	grid with development of energy measurement and possible new technologies to measure it
12	FR/GRTgaz	Part III CVDD <i>A minimum temperature range of 50 °C for the climatic environment.</i> Not necessary for devices in controlled conditions (in a cabinet)	Requirement only for outdoor applications		Noted Keep it as it is to be coherent with conversion devices requirements
13	FR/GRTgaz	Part III CVDD <i>Electromagnetic immunity</i> Effects and criteria are limited to electromagnetic immunity. There are other disturbance tests (power interruption, variation, electric pulses, discharges) Influence tests are also missing (temperature tests, heat, vibrations, chocs)			Right indeed. This part is the same as for conversion devices in today MID.

14	FR/GRTgaz	<i>The effect of an electromagnetic disturbance on a calorific value determining device shall be such that:</i> — <i>the change in the measurement result is no greater than the critical change value as defined in point 3.1.3, or</i> — <i>the indication of the measurement result is such that it cannot be interpreted as a valid result, such as a momentary variation that cannot be interpreted, memorised or transmitted as a measuring result.</i> Limit value seems very small !			These values are in OIML R140 T.2.17.2
15	FR/GRTgaz	<i>The critical change value is the greater of the two following values:</i> - <i>one fifth of the magnitude of the maximum permissible error for the calorific value.</i> - <i>two scale intervals of the CVDD. th of the magnitude of the maximum permissible error for the calorific value.</i> Will this requirement in OIML R140 be kept in future version of the recommendation ?			Difficult to say. We are asked to use data coming from relevant standards.
	Farecogas	Part III: In line with comments #14 and #15 by FR/GRTgaz and with the potential future approval of a single device measuring energy. Currently			Ask for class 1.5

		part III CVDD shows <i>Effect of Disturbances and Durability</i> limits which are different from Part I Gas Meters. Part III current limits are partially taken from OIML R140, partially new and are not divided in Classes A, B, C. A possible suggestion would be to copy and paste the values of part I respectively with class C values = class 1.5 values, class B = class 1, class A = class 0.5. Please note that the durability limits of MID MI-002 Part I and the “In-service” allowed MPEs values of OIML R137 are already different. In any case, it should be clear which values shall be applied for the approval of a single Device measuring Energy (a Device that integrates Gas meter, Volume and Energy Conversion).			
	Farecogas	Part III: Table 2 of OIML R140 shows the same MPE for CVDDs of Class B and C, while for other instruments of the same table it is not like this. To be future proof and allow more distributed and affordable CVDDs, we could deviate from OIML and allow an MPE of 1.5% for CVDD Class C. Is there any			We are required to use technical standards. Class 1.5 for CVDD does not exist.

		concern to deviate from OIML R140 if it makes sense?			
16	FR/GRTgaz	4.2. Effect of disturbances	... shall not exceed the MPE.		Noted
17	FR/GRTgaz	6 Suitability (emergency power supply or other means to safeguard) Costful requirement with a dedicated power network. Why should we impose it for CVDD and not for meters and VCD ?			This requirement already exists in MI 002 §5.1
	Farecogas	Part III: Suitability section should not lead to wrong inferences, like excluding battery powered CVDDs. I would suggest to add as well in part III the relevant sentence of Part I: <i>“A dedicated power source shall have a lifetime of at least five years”</i> or something similar			Part III has been rewritten in coherence with part II which is more simple.
25	NL/NMI	Part III 1.1. A minimum temperature range of 50 °C for the climatic environment. 1.2. The nominal value of the AC voltage supply and/or the limits of DC supply.		Can be removed, already stated for gas meters	Exact
	Part IV				
18	FR/GRTgaz	8. Putting into use			Not really

		(a) Do class 0.5 exist for residential ?			
19	FR/GRTgaz	8. Putting into use (b) Not for classes 1 and 0.5 ?			It is already the actual version