GLOBAL STAKEHOLDER CONSULTATION FORM FOR PROPOSED NEW BASELINE AND MONITORING METHODOLOGY OR METHODOLOGICAL TOOL (version 01.0)	
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Based on an assessment of information in the A6.4-FORM-METH-002 and its application in sections A to C of the submitted draft project design document (A6.4-FORM-AC-020), provide your comments to the proposed new methodology using the tabular format below. Please indicate the sections or issues to which your comments refer to.	
Date received by the secretariat	

#	Section / Para no./ Annex / Figure / Table	Type of comment **ge** = general **te** = technical **ed** = editorial	Comment (including justification for change)	Proposed change (including proposed text)
1	**Section 5 / Paragraph 8 and throughout the text**	**te**	The methodology restricts applicability to existing gas transmission and distribution systems and excludes gas extraction and processing facilities. This represents a significant departure from AM0023, which applies across gas production, processing, transmission, storage and distribution facilities. This scope restriction is particularly significant given that the largest methane abatement potential from LDAR lies in the upstream segment. According to the IEA Methane Tracker, approximately 85% of the global LDAR abatement potential is associated with upstream operations, while only around 15% is associated with downstream transmission and distribution systems. Despite this substantial mitigation potential, methane emissions from the upstream sector have remained persistently high for many years, suggesting that significant barriers to the implementation of advanced LDAR programmes continue to exist. Excluding extraction and processing facilities from the methodology therefore removes a large share of the available mitigation potential and may unnecessarily restrict the deployment of Article 6.4 activities where the greatest emission reduction opportunities exist. The restriction appears to be linked to considerations related to long-term climate alignment and fossil-fuel lock-in, as described in comment related to section 9.2 (see comment 3 below). Nevertheless, the methodology does not explain why these considerations justify a categorical exclusion of extraction and processing facilities while transmission and distribution systems remain eligible. It should be noted that environmental integrity of AM0023 was recently assessed under the ICVCM CCP framework, and its applicability across the full oil and gas value chain was not challenged.	Keep the scope of the methodology aligned with AM0023, including gas production, processing, storage systems and refinery facilities. As the issue of potential fossil-fuel lock-in is not a function of the segment of the value chain where LDAR project is implemented, no segments should be categorically excluded from the methodology. Hence, it is proposed to not subjectively restrict the scope (and thus the prospects for use of this methodology). Therefore, it is proposed that the following text is considered for Section 2.1 (Scope): *"This mechanism methodology applies to Article 6.4 activities that introduce advanced leak detection and repair (LDAR) programmes to identify and repair physical leaks in components of gas production, processing, transmission, storage and distribution systems, and in refinery facilities."*

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2	**Section 9.1 / Paragraph 14**	**te**	The methodology appropriately recognizes the requirement to demonstrate regulatory surplus in accordance with the Additionality Standard. However, it provides limited guidance on how this assessment should be conducted in the specific context of LDAR activities. This is particularly relevant because regulatory frameworks applicable to methane emissions may vary significantly across jurisdictions and may include different combinations of leak inspection requirements, detection technologies, repair obligations, maintenance programmes, methane management requirements or performance standards. As currently drafted, the methodology does not establish how activity participants should assess whether an existing regulatory framework is equivalent to, or less stringent than, the proposed advanced LDAR programme. As a result, the application of the regulatory surplus requirement may be interpreted inconsistently across activities and jurisdictions. Additional methodological guidance is required to ensure a transparent and consistent assessment of regulatory surplus in the context of LDAR activities.	Consider expanding the regulatory surplus section to include specific guidance on the assessment of regulatory requirements applicable to LDAR activities. The following text could be considered: *Activity participants shall demonstrate that the proposed Article 6.4 activity achieves mitigation outcomes that exceed any mitigation required by applicable laws or regulations, unless such laws or regulations explicitly refer to or formally integrate the Article 6.4 mechanism as an instrument for implementation.* *For this purpose, activity participants shall identify and assess all laws, regulations, standards or mandatory policies applicable to the operation of the facilities included in the project boundary that may require leak detection, leak repair, equipment maintenance, monitoring, inspection, reporting or other management actions related to fugitive emissions.* *Where applicable regulations require certain technological, performance or management actions, the regulatory analysis shall demonstrate that such requirements do not mandate the implementation of an advanced LDAR programme with a scope, frequency, detection technologies, performance thresholds and systematic repair practices equivalent to those applied under the proposed activity.*
3	**Section 9.2 / Paragraphs 16, 17**	**te**	The methodology addresses lock-in concerns through a series of eligibility restrictions, including limiting applicability to existing transmission and distribution systems and excluding extraction and processing facilities (refer also to comment 1 above). At the same time, it states that leak repairs in transmission and distribution systems do not	Reconsider the approach to addressing potential lock-in issues. The categorical exclusion of extraction and processing facilities, combined with the restriction to existing transmission and distribution systems, does not in itself ensure that lock-in risks are appropriately assessed or

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			prolong the lifetime of such systems and are therefore not incompatible with the long-term goals of the Paris Agreement. However, the basis for distinguishing between upstream and downstream segments of the oil and gas value chain in relation to lock-in concerns is not clearly substantiated. From a technical perspective, methane leak detection and repair activities reduce fugitive emissions through the same mitigation mechanism regardless of where they are implemented within the gas value chain.	mitigated. See also suggestions in comment 1. As a potential solution, lock-in should be assessed at the level of the individual activity and transparently documented in the PDD, while the methodology should refer to and apply the relevant PACM rules and guidance on lock-in.
4	**Section 9.3.1 / Paragraphs 18, 19**	**te**	The methodology provides guidance on the application of benchmark and investment comparison analyses but does not provide guidance on the identification of realistic and credible alternative scenarios. Given that the selection of the appropriate investment analysis approach depends on the alternatives identified, the absence of such guidance may result in inconsistent application of the investment analysis across activities. The methodology should therefore provide guidance on the identification of plausible alternative scenarios for LDAR activities.	Provide guidance on realistic and credible alternative scenarios for LDAR activities. Examples could include: (i) Implementation of the advanced LDAR programme without Article 6.4 revenues; (ii) Continuation of current practice; (iii) Implementation of a conventional LDAR programme; (iv) Implementation of LDAR only to the extent required by regulations or other mandatory requirements; and (v) Leak management through routine maintenance or component replacement.
5	**Section 9.3.3 / Paragraph 22**	**te**	The methodology applies Approach B using a component-based count indicator. However, the methodological basis for using the number of components covered by Advanced LDAR as a proxy for the diffusion of the measure being assessed, namely the implementation of Advanced LDAR programmes, is not clearly justified and appears inconsistent with the overall approach to demonstrating additionality. The first sentence of Section 9.3 states that "the activity participant shall demonstrate additionality at the level of the LDAR implementation", i.e. at the programme level rather than at the level of individual components.	Consider assessing common practice at the facility level, focusing on the implementation of Advanced LDAR programmes rather than the number of components covered. The following text could be considered: *(a) Define the measure assessed as the systematic implementation of an Advanced LDAR programme involving regular leak detection, quantification and repair using advanced technologies and structured management practices;*

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			In addition, from a practical perspective, the proposed approach may present significant implementation challenges for activity participants and validation bodies, as it requires information on both the number of components covered by Advanced LDAR programmes and the total population of components within the applicable geographical area. Such information may not always be available or verifiable, particularly in competitive market environments.	*(b) Identify comparable facilities operating within the same subsector and under comparable technical and regulatory conditions;* *(c) Define the geographical scope of the analysis; and* *(d) Apply an indicator based on output or throughput comparing the number of comparable facilities implementing Advanced LDAR programmes with the total number of comparable facilities.*
6	**Section 10.2.1/ Paragraph 28,29**	**te**	The methodology introduces three alternative baseline scenarios, namely (i) continuation of current practices, (ii) implementation of the proposed Advanced LDAR programme without A6.4 registration, and (iii) implementation of the proposed activity at a later point in time. However, the methodology only provides a procedure for determining baseline emissions when continuation of current practices is identified as the most plausible baseline scenario. No corresponding procedure is provided for the quantification of baseline emissions if either of the other two scenarios were to be selected. The methodology should either justify why scenarios (ii) and (iii) cannot be selected as the baseline scenario, or provide a corresponding procedure for determining baseline emissions under those scenarios. Refer also to comment 12.	Consider defining the baseline scenario as the continuation of existing leak detection and repair practices. Alternatively, provide procedures for quantifying baseline emissions under the other baseline scenarios identified in the methodology.
7	**Section 10.2.2 /Paragraph 30**	**te**	The methodology relies on direct measurement of physical leaks and uses the duration parameter (Tj,y) as a key determinant of baseline emissions. While detailed provisions are provided for the measurement of leak flow rates and associated uncertainty, the methodology provides limited guidance on how leak duration should be determined, justified and documented. The limited provisions on recording operating hours and outages are not sufficient to ensure a transparent and consistent determination of Tj,y,	Provide guidance on the determination and documentation of leak duration (Tj,y) under baseline conditions, including the types of evidence that may be used to support its estimation.

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			despite its significant influence on calculated baseline emissions. The methodology requires additional guidance on the determination and documentation of leak duration assumptions.	
8	**Section 10.2.2 /Paragraph 30** **(also, repeated in paragraph 38)**	**te**	The methodology specifies the point in time from which leaks identified after the initial survey are accounted in baseline emissions ("*For parts of components where no physical leaks were detected at the initial survey and where a leak or leaks were detected during a subsequent survey, baseline emissions shall be added to the database and accounted in the baseline calculation from the moment when the leak was detected and measured*". However, it remains unclear from which point in time leaks identified during the initial survey (i.e. prior to the start of the crediting period) are to be accounted. This represented a shortcoming of AM0023, where the absence of explicit guidance left interpretations to project developers and DOEs. In practice, baseline emissions were typically accounted from the moment each individual leak was repaired, resulting in inconsistent accounting timelines across leaks within the same project. Clarification on this point would be important to ensure consistent application and avoid variability in baseline emission quantification.	Define a single point in time from which leaks identified prior to the start of the crediting period are accounted. It would be logical to include all leaks within the project boundary from the start of the crediting period (i.e. leaving no gaps in emissions accounting of individual leaks). The following text could be considered: "*For parts of components where physical leaks were detected at the initial survey prior to the start of the crediting period, baseline emissions shall be accounted from the start of the crediting period.*" To avoid overestimation of emission reductions, the same leaks should be accounted for in activity emissions until they are repaired, as further explained in the relevant comment on activity emissions below.
9	**Section 11.1 /Paragraph 41**	**te**	Activity emissions (or project emissions as they are called in the text) are accounted only in two cases: 1) when leak repair turned out to be ineffective, and 2) emissions from a newly identified leak as long as it is not repaired. However, this does not address emissions that occur from leaks that were identified as part of the initial survey (prior to the start of the crediting period) before they are repaired.	Treat emissions from leaks identified prior to the start of the crediting period the same way as emissions from leaks identified in subsequent surveys, i.e. emissions from a leak should be accounted for until the leak is repaired effectively. The following text could be considered: "*For parts of components where physical leaks were detected at the initial survey prior to the start of the crediting period, activity emissions shall be accounted from the start of the crediting period until the leaks are successfully repaired.*"

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10	Section 10.3 /Paragraph 32	te	Paragraph 31 introduces a downward adjustment factor that is linked to uncertainty of ex-ante estimation of baseline emissions. However, it is not clear why uncertainty should be addressed through the downward adjustment of the baseline. According to the A6.4 "Standard: Setting the baseline in mechanism methodologies", the purpose of downward adjustment is to ensure that the baseline is below business-as-usual and aligned with ambition requirements, rather than to account for measurement or parameter uncertainty. Moreover, the methodology already incorporates measurement uncertainty in the quantification of baseline emissions through the procedures applied earlier in Section 10.2.2. Introducing an additional downward adjustment linked to uncertainty may therefore lead to double counting of conservativeness or inconsistent treatment of uncertainty within the methodology. On this basis, the use of uncertainty as a driver for the adjustment factor does not appear to be methodologically appropriate.	Remove the component of the adjustment factor related to uncertainty.
11	Section 10.3 /Paragraph 34	te	The methodology requires the use of sectoral methane reduction targets contained in NDCs or other official policy instruments where such targets exist and result in a downward adjustment greater than 2% per year. However, it does not establish criteria for assessing whether a given target is sufficiently representative of expected reductions in methane emissions from transmission and distribution leak sources. Based on the available NDCs and policies published so far, the national targets do not always provide the level of granularity that would explicitly set "methane emission reduction target for the natural gas transmission/distribution sector". And even where targets are defined for the transmission and distribution sector, they may reflect the combined effect of multiple mitigation	Require activity participants to evaluate whether applicable NDC targets and supporting policies provide an appropriate basis for deriving project-specific downward adjustments for LDAR activities.

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			measures, including network modernization, equipment replacement, maintenance requirements, gas recovery or demand-side measures, rather than reductions attributable specifically to leak detection and repair activities. The methodology should therefore establish criteria for determining when sectoral methane reduction targets and policies are sufficiently representative to derive methodology-specific downward adjustments for LDAR activities.	
12	**Section 10.4 /Paragraph 35, 36**	**te**	The methodology introduces the assessment of alternative scenarios in both the baseline scenario identification and conservative BAU determination sections (see also comment 6). In particular, paragraphs 35–36 require the consideration of multiple plausible BAU scenarios and the selection of the most conservative option, while also requiring consideration of applicable legal requirements, policies and targets. However, it is not clear how the conservative BAU assessment relates to the earlier baseline scenario identification process, nor how conservativeness should be assessed across alternative scenarios. Clarifying the relationship between these steps, or consolidating them where appropriate, will improve transparency, avoid duplication and facilitate consistent application of the methodology.	Clarify the relationship between baseline scenario identification and conservative BAU determination, including how conservativeness should be assessed across alternative scenarios and how these assessments should be applied consistently within the methodology.
13	**Section 10.4.1 /Paragraph 35, 36**		The methodology calculates both baseline emissions prior to downward adjustment and conservative BAU emissions using the same scenario assumptions and quantification approach. Given that both represent the continuation of existing practices in the absence of the Article 6.4 activity, a separate determination of conservative BAU emissions is not necessary. If both quantities are intended to represent the same underlying scenario, the methodology could be streamlined by explicitly recognizing this relationship and	Consider replacing these paragraphs with the following text, and refer to section 10.2.1, as appropriate: *The conservative business-as-usual (BAU) scenario for Article 6.4 activities eligible under this methodology is deemed to be the same as the baseline scenario, i.e. the continuation of existing leak detection and repair practices in the absence of the Article 6.4 activity. Under this scenario,*

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			avoiding duplication of calculation steps.	*physical leaks would continue to be detected and repaired only to the extent they would be addressed under existing practices, including routine maintenance, safety-related repairs, component replacement, and applicable regulatory requirements.*
14	**Paragraphs 13, 30, 42 and section 14 (parameters tables)**	**ge**	The methodology relies extensively on a project database for defining the activity boundary, tracking leak detections and repairs, supporting baseline and project emission calculations, and implementing QA/QC procedures. However, it does not specify the minimum information to be recorded, the requirements for maintaining the database, or the records necessary to support validation and verification. Given the central role of the project database throughout the methodology, these minimum requirements should be defined to ensure consistent implementation, transparency and reproducibility across project activities.	Introduce minimum requirements for the project data management system. The following text could be considered: *Activity participants shall establish and maintain a data management system to ensure the traceability, consistency, transparency and completeness of information related to the identification, quantification and repair of physical leaks.* *The data management system shall include, at a minimum:* • *information required to uniquely identify each leaking component;* • *records of leak detection and, where applicable, methane flow rate measurements, measurement methods and associated uncertainty;* • *information supporting the determination of the duration for which each physical leak is included in baseline emissions and/or project emissions during the relevant crediting year;* • *records of repair actions, follow-up inspections and confirmation that the leak no longer persists; and* • *records of maintenance activities,*

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				component replacement, shutdowns or other operational events relevant to the determination of leak duration. *The data management system shall be maintained throughout the crediting period and the assumptions and records supporting emission calculations shall be available for validation and verification.*
15	**Section 11.1 /paragraph 41**	**te**	The methodology states that, where a repaired leak reoccurs, it is conservatively assumed that the leak resumes at the lower of the original measured leak rate and the newly measured leak rate. However, in the context of project emissions, the use of a lower leak rate results in lower project emissions and therefore higher credited emission reductions.	The text should be revised to ensure conservativeness. For example: *"If a repair of a physical leak ceases to function, it is conservatively assumed that the leak resumed at the highest of either […]:"*
16	**Section A.3 /Paragraph 2**	**te**	The methodology suggests that after leaks are repaired "…another measurement is taken confirming the leak has been eliminated." However, to confirm the effectiveness of leak repair another inspection is required (e.g. using an OGI camera), while measurement is not always necessary (yet it may be still done if repeated leaks are identified).	Proposed text: "The leaks are then repaired and another inspection is taken confirming the leak has been eliminated."
17	**Section 3. /paragraph 4**	**ed**	The definition of Refinery gas is not included, while it is used in the text (on page 35) and was defined in AM0023.	Add the definition from AM0023: "Refinery gas. Also known as still gas, can be defined as: "Any form or mixture of gases produced in refineries by distillation, cracking, reforming and other processes. The principal constituents are methane, ethane, ethylene, normal butane, butylene, propane, propylene, etc. Still gas is used as a refinery fuel and a petrochemical feedstock" and is generally produced from light ends distillation units of refinery facilities, where it has a pressure that allows its immediate use."

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Document information

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