



CALL FOR INPUT

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Document reference number and title: (Recommendation from the MEP to SBM020)

Draft mechanism methodology: N₂O abatement from nitric acid production (version 02.0)

Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
1	COVER NOTE	1	We would like to sincerely thank the Supervisory Body and the Methodological Expert Panel for the considerable effort invested in developing the draft mechanism methodology and for the opportunity to provide further input. The development of a robust methodology for N ₂ O abatement in nitric acid production is highly important, given the material climate benefits associated with reducing these emissions and the need to ensure high environmental integrity. At the same time, it is essential that the Article 6.4 methodology is based on the best available verified data, maintaining scientific consistency, and reflecting real operational conditions. We therefore welcome the continued refinement of this methodology and remain optimistic that the final version will provide a sound and practical framework for high-quality N ₂ O mitigation activities under Article 6.4.	-

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2	BASELINE EMISSIONS	35 (44)	Acc. to para. 35. of the draft methodology, the downward-adjusted baseline emissions shall be calculated as per Equation (2), which is given on an annual basis. Whereas, acc. to para. 44. of the draft methodology, the project emissions of N ₂ O from the tail gas of the nitric acid production line shall be calculated as per Equation (5) based on the mass flow of N ₂ O in the gaseous stream of the tail gas in each hour that the nitric acid production line was in operation (FN ₂ O,tailgas,h). The combination of Equation (2) and (5) may produce a situation where project emissions exceed the baseline emissions, even where the abatement system is working highly efficient, e.g.; in times the annual nitric acid production cap (PNA, cap) has been reached. Therefore, the calculation of baseline and project emissions should be reviewed to ensure that the methodological calculation does not result in negative emission reductions, which are actually physically impossible.	Revise the calculation in order to set emission reductions to zero for those hours during which the nitric acid production line was in operation, but the methodological calculation would result in negative emission reductions.
3	COVER NOTE	12	When new legal regulations are introduced, they typically include a transition or grace period before becoming fully enforceable, and this principle should also apply to Article 6.4 project activities. Accordingly, any N ₂ O-related regulation should be considered relevant for the regulatory analysis only from the date, on which it is applicable for the project plant, including any prescribed grace period. In addition, the implementation of secondary or tertiary N ₂ O abatement systems requires substantial capital expenditure, and the final investment decision is taken only after a positive additionality assessment at the project registration stage. In this context, it is reasonable that the regulatory analysis being reassessed at the renewal of each crediting period, rather than at each monitoring period. The same applies for Section 6.1, para. 31.	Reformulated sentence: “To ensure the continued adequacy of the methodological approach for baseline setting (i.e., the assumption that no legal requirement is applicable for the project plant that sets a limit equal to or below the N ₂ O baseline emission factor), the regulatory analysis shall be conducted at the renewal of each crediting period, taking into account any applicable grace period.”

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4	COVER NOTE	14	Firstly, it should be noted that a nitric acid plant is part of a complex chemical compound that is restrained by several parameters related to the operation, logistics and market demand of the final products. As nitric acid is only an intermediate product, its production volume is inherently limited by market dynamics of the final products. Furthermore, the nameplate capacity of a nitric acid plant is a fixed parameter and given by the technology provider. Therefore, this parameter is simple to be definable, transparent and conservative. Therefore, to avoid any increase in the nitric acid production as a result of the implementation of the Article 6.4 activity, the quantity of nitric acid production used for calculating baseline emissions should be conservatively capped at the nameplate capacity of the plant. This also applies for section 7.2.1, para. 37 (a).	"... the mechanism methodology caps the quantity of nitric acid production used for calculating baseline emissions to the nameplate capacity of the nitric acid plant ..."
5	APPLICABILITY	17	The restriction to a single nitric acid production line per project activity would add unnecessary complexity and would significantly increase transaction costs. Previous CDM experience (e.g. ref.nr. 0765, 1369, 1481, etc.) demonstrates that projects covering multiple production lines, which are situated at one plant site, were successfully validated and verified without any technical or procedural complications. Therefore, inclusion of multiple lines, which are situated at the same plant site, within one project activity remains manageable, transparent, and consistent with MRV requirements.	Requirement shall also allow project activities with multi-line plants, which are situated at one / the same plant site.
6	BASELINE EMISSIONS	7.2.2	Please refer to our comment regarding Appendix, section 3.3	Please refer to our proposed update as per comment regarding Appendix, section 3.3

7	APPENDIX	16	<p>We would like to raise the following technical observations regarding the proposed BAT baseline emission factor, in particular the value of 3.74 kg N₂O/t HNO₃. A parameter of such fundamental importance to the determination of creditable emission reductions should be based exclusively on verified data as preliminary or unverified figures do not provide a sufficiently robust basis. From a scientific and methodological standpoint, the selection of the BAT value should be consistent with the expected process behaviour of nitric acid plants by pressure category. High-pressure nitric acid plants generally exhibit higher specific N₂O formation. Against that background, it appears scientifically and technologically inconsistent that the lowest observed emission factor across all pressure categories is derived from a single high-pressure plant, and reliance on that value raises concerns regarding both its data integrity and its representativeness as a BAT benchmark. After having analysed public CDM project data and with respect to CDM Project #1171, the available project documentation indicates that the value of 3.74 kg N₂O/t HNO₃ originates from the initial draft monitoring report, which deviates from the final, DOE-verified monitoring report. It shall further be noted that the validation report required the verifying DOE to confirm the baseline emission factor. The final verified Monitoring Report #1 and the Verification Report #1 confirmed that the correct baseline emission factor is 5.64 kg N₂O/t HNO₃. Accordingly, only the verified value of 5.64 kg N₂O/t HNO₃ shall be used as the relevant reference point for A6.4 baseline emission factor determination.</p> <p>Proposed BAT emission factor determination: An analysis among existing nitric acid plants that have been registered as CDM projects applying methodologies AM0028 and AM0034 (or have been renewed under ACM0019), has been prepared to determine the most accurate baseline N₂O emission factors per pressure type for project type 1 or 2 (introduction or restart of N₂O abatement). Resulting values for BAT baseline emission factors [kg N₂O / t HNO₃] (based on verified data and on full calendar years) can be summarized as</p>	<p>Following baseline N₂O emission factors [kg N₂O / t HNO₃] (based on verified data and on full calendar years) shall be applied: • Single low pressure: 4.8 • Single medium pressure: 5.3 • Single high pressure: 7.6 • Dual low/medium pressure: 4.8 • Dual medium/high pressure: 5.9</p>
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			<p>follows: • Single low pressure: 4.8 • Single medium pressure: 5.3 • Single high pressure: 7.6 • Dual low/medium pressure: 4.8 • Dual medium/high pressure: 5.9 The resulting N₂O emission factors appear reasonable and consistent with the respective nitric acid plant pressure categories, reflecting the expected relationship between process pressure configuration and emission performance.</p>	
8	APPENDIX	29	<p>In para. 29 of the Appendix it is stated that a single BAU emission factor of 3.99 kg N₂O / t HNO₃ is used for all pressure levels and that it is based on all CDM and JI plants. In Table 4, the different BAU values are given per pressure type, which are the same as for the BAT emission factor under table 3. So, it seems that the BAU emission factor is based on the same set of data as the BAT baseline N₂O emission factor. Keeping in mind our comment above regarding CDM Project #1171, where unverified data has been used, we highly recommend to also check and update the proposed BAU emission factors. Furthermore, we tried to reproduce the determination of the proposed BAU emission factor of 3.99 kg N₂O / t HNO₃, but were not able to due to an unclear set of data or in case the description of approach (“bootstrap analysis”, “95 % confidence interval”, ...) has not been transparently reflected in the results of data, e.g.: • In Table 4, the values are given per pressure type (heading “Calculated values from CDM and JI plants adjusted for uncertainty at a 95 % confidence interval”). • Comparing them with table 3 (BAT emission factor), it is reported that the same set of data is used, but heading “Lowest observed baseline emission factor” – a different description. Therefore, we want to repeat our comment to check the proposed BAU emission factors in order to assure appropriateness of data.</p>	Please check and update the proposed BAU emission factors