SIMPLIFIED SUMMARY OF THE NEW BASELINE AND MONITORING METHODOLOGY OR METHODOLOGICAL TOOL FORM (Version 02.0)

BASIC INFORMATION OF THE NEW BASELINE AND MONITORING METHODOLOGY OR METHODOLOGICAL TOOL	
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Type of standard	New baseline and monitoring methodology
Unique reference number	A6.4-PMM006
Title of the new baseline and monitoring methodology or new methodological tool	Fertilizer production with renewables-based ammonia
Date of completion of the initial assessment	06/01/2026
SUMMARY OF THE NEW BASELINE AND MONITORING METHODOLOGY	
Scope of the methodology	**4. Manufacturing industries** Ammonia production as an industrial process requiring substantial energy input. This methodology is globally applicable to project activities that produce ammonia, that is less carbon-intensive than conventional ammonia production, primarily with renewable electricity (RE) for: • Production of hydrogen (H_2) using electrolysers to separate water into H_2 and O_2; • Production of nitrogen (N) through Air Separation Plants or other facilities; • Synthesis of hydrogen and nitrogen to produce ammonia (Haber Bosch Process). The methodology allows under certain conditions for up to 10% of the electricity consumed to stem from the grid instead of dedicated renewable energy plants.
Key applicability conditions	1. The activity produces renewables-based ammonia for fertilizer production; 2. No fossil fuels are used as feedstock in the production of hydrogen and ammonia; 3. Hydrogen under the activity is produced from electrolysis and the entire production of hydrogen is used for the renewables-based ammonia production; 4. Nitrogen is produced from air separation; 5. Electricity used to produce hydrogen, nitrogen and ammonia is either sourced from one or a combination of the following sources: i. from dedicated renewable energy sources connected directly to the ammonia production facility;

	ii. from dedicated renewable energy sources connected via the electricity grid to the ammonia production facility; iii. from the grid, where the grid emission factor (i.e. the combined margin) is equal or less than 0.2 tCO2e/MWh and it can be demonstrated that the share in total electricity production was expanded over the last 5 years prior to the start date of the activity; iv. From the grid, where the grid emission factor (i.e. the combined margin) is above 0.2 tCO2e/MWh and it can be demonstrated that the share in total electricity consumption from the grid is below 15%. 6. The activity shall demonstrate that the planned use of electricity from the grid will not result in increased grid instability and constraints negatively impacting other consumers of grid electricity; 7. Ammonia is produced by the Haber-Bosch process using the hydrogen and nitrogen produced as per the previously described conditions; reductions. 8. Only the share of ammonia used for fertilizer production within the host country of the activity is applicable for generating emission reductions; 9. The activity shall use no more than 5 % of the drinking water available locally, to ensure that the water used in the electrolysis will not displace other uses; 10. Activities must demonstrate minimal impact on water needed for drinking, agriculture, livelihood and ecosystems as per Appendix II; 11. Activities must demonstrate that water utilization will not have an impact on ecosystems resulting in an increase of emissions (e.g. loss in biomass or soil carbon stocks); 12. This methodology is applicable to activities implemented in existing ammonia and fertilizer production facilities replacing fossil-fuel-based hydrogen and ammonia production (brownfield) or to the construction of new hydrogen and ammonia production facilities (greenfield activities); 13. For brownfield activities, it must be possible to distinguish all production steps, related energy inputs and emission sources between the existing production pathway and the activity production pathway. This may be demonstrated based on the entire production facility or on the level of entire production lines; 14. For brownfield activities, it must be demonstrated that replaced equipment and production facilities are scrapped and not used elsewhere; 15. It can be demonstrated that there is no risk of double counting as per chapter **Error! Reference source not found.** of this methodology;
Baseline approach and downward adjustment	The baseline scenario is determined as follows: • Greenfield activities and brownfield activities after the end of the remaining lifetime: The BAT approach is selected from paragraph 36 of the RMPs to set the baseline for activities eligible under this. • Brownfield activities until the end of the remaining lifetime: The baseline approach shall be based on existing actual or historical emissions. Downward adjustment in the calendar year of the start date of the first crediting period (for approaches based on 36(iii)): based on the uncertainty factor or the minimum downward adjustment.

	Downward adjustment in subsequent years: based on the maximum between 1% per year and the yearly adjustment for achieving the Party's net zero target.
Demonstration of additionality	The demonstration of additionality contains the following steps detailed in the methodology: STEP 1. Regulatory Analysis STEP 2. Avoidance of locking-in the level of emissions STEP 3. Investment analysis STEP 4. Common practice analysis (for the production of renewable-based ammonia in the country)
Calculation of emission reductions or net GHG removals	Activity emissions refer to the total direct and indirect greenhouse gas (GHG) emissions resulting from the implementation of the Green Ammonia production project. These emissions must be compared with baseline emissions to determine the net mitigation impact. Activity emissions sources include: • Direct onsite emissions from hydrogen and ammonia during ammonia production, including physical leaks of hydrogen; • Indirect emissions resulting from electricity consumption during the ammonia production process. • Emissions from transportation of ammonia to the fertilizer production facility (if applicable) • Emissions from land clearing for facility construction
Monitored parameters	~~BAT Best Available Technology~~ ~~AF Downward Adjustment Factor~~ ~~$F_{consume}$ Fuel consumed by the project activity~~ $PNH3_{,Act,y}$ Quantity of Green Ammonia produced in PACM project activity in year y $LK_{H2,y}$ Quantity of hydrogen physically leaked from the production facility in year y EC_{grid} Quantity of renewable electricity generated and supplied to the green ammonia production facility in year y $FC_{i,y}$ t Quantity of fuel type i combusted in process j during the year y Df trip distance between the origin and destination of freight $FR_{,f,i,y}$ mass of freight transported $W_{c,i,y}$ fraction of carbon in fuel type *i* in year *y* $\boldsymbol{\rho,i,y}$ Density of fuel type i in year y $NCV_{i,y}$ Weighted average net calorific value of the fuel type i in year y

	$EFCO_{2,e,y}$ Weighted average CO_2e emission factor of fuel type *i* in year *y*
SUMMARY OF THE NEW METHODOLOGICAL TOOL	
Scope of the methodological tool	>>
Key applicability conditions	>>
Calculation of baseline emissions/removals, project emissions/removals or leakage	>>
Monitored parameters	>>

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Document information

Version	*Date*	*Description*
02.0	20 August 2025	Revision to incorporate new sections and sub-sections in line with current standards.
01.0	18 December 2024	Initial publication of form template.

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