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Information note

Summary of the comments received from stakeholders on the draft methodological tool "Emissions from electricity generation and/or consumption" from the call for public inputs to annexes of the MEP010

Version 01.0

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1. Introduction

1. This note provides a summary of the views submitted by stakeholders in response to the call for public inputs to the draft version of the methodological tool "Emissions from electricity generation and/or consumption" prepared by the Methodological Expert Panel (MEP) at its tenth meeting.

2. The call for public inputs was open between 10 to 31 December 2025, and a total of five submissions were received. The full list of submissions can be found in the appendix to this note.

2. Summary of views to the draft methodological tool "Emissions from electricity generation and/or consumption"

3. The following sections summarize the views expressed in the submissions.

2.1. General

4. Many stakeholders will seek to transition CDM projects using TOOL05/TOOL07 logic, and the differences in OM/BM weighting, applicability, and conservativeness may materially affect credit volumes. The methodological tool should contain a transition note or guidance document explaining:

   (a) Key methodological shifts,

   (b) Expected direction of impact on emission reductions,

   (c) How legacy data can be reused where appropriate. [2]

5. Due to merger of the two CDM tools (#5 and #7), this tool has potentially become very complex, especially differentiating between project activity as production source and consumption source. [4]

6. There are several considerations of circumstances of countries such as 'surplus grid' or 'deficit grid' that has an impact on what is displaced by renewable energy plant, whether existing plants only or combinations of existing and futuristic plants. [4]

7. Under wheeling mechanism of electricity, grid is used by a renewable energy project activity just as a medium of transfer of electricity from point of generation to a specific point of use and grid is not the user. Such plants, although grid connected, should not be considered in calculation of operating margin. [4]

8. The stepwise approach is provided whereas few steps may or may not be applicable, such as in context of emission factor either it corresponds to electricity system or from captive fossil fuel power plants. Thus, the Step 7 and Step 8 should be merged as:

   (a) Step 7: Determine the emission factor

   (b) Step 7.1: for electricity system, where applicable;

(c) Step 7.2: for electricity sourced from captive fossil fuel power plants, where applicable. [3]

9. While, the draft tool appropriately merges CDM tool 7 and CDM tool 5, the note fails to provide any guidance on how to reflect the unconditional NDC target in baseline setting. The inclusion of an additional step may be considered which. This step should provide guidance on how to reflect uNDC target for power sector may in baseline setting, encourage dynamic baseline setting. [5]

2.2. Definitions

10. The current definition of net electricity generation does not address whether the issuance, sale, or redemption of environmental attributes (such as renewable energy certificates) should be deducted from the net electricity generation figure. It should be clarified that these environmental attribute transactions are to be explicitly deducted if applicable, ensuring transparent and consistent accounting. Add to the definition of net electricity generation: *"Net electricity generation shall be calculated after deducting any electricity amounts associated with the issuance, sale, or redemption of environmental attributes if such transactions occur”*. [2]

11. While the cover note clearly refers to technical losses, the actual draft tool and its definitions could be improved by referring more explicitly to ‘technical’ transmission and distribution losses. Utilities typically know the total losses comprising both, technical loss as well as theft, and the information on technical losses is more scarce and typically originates from modelling the power system in dedicated software. These losses may comprise the transmission and distribution wires heating losses and the unknown and simultaneous losses incurred during conversion of electrical energy to work to produce goods and services. [5]

12. The tool relies on a binary classification of power units as “must-run” or “non-must-run,” with most renewable power units automatically classified as must-run. In electricity systems with high VRE penetration, renewable generation is increasingly subject to curtailment, market-driven dispatch constraints, and seasonal variability. A binary must-run classification may therefore misrepresent actual marginal displacement, particularly under Case 2. We suggest refining the must-run concept to improve accuracy without compromising conservativeness by allowing:

(a) Explicit consideration of curtailment rates;

(b) Use of residual load or price-based indicators where available;

(c) Differentiation between technical must-run and economically dispatched renewables. [3]

2.3. Applicability conditions

13. The current version of the tool explicitly excludes or postpones applicability to captive renewable power plants, hybrid systems (combining grid electricity, storage, and behind-the-meter renewable generation) and electricity consumption associated with flexible demand, load shifting, or demand response. A growing share of potential Article 6.4 activities – particularly in industrial decarbonization, green hydrogen production, EV charging infrastructure, and data-intensive facilities – operate in hybrid configurations. Excluding or only partially addressing these configurations may systematically

underestimate their real displacement effects. To address this, at minimum, interim guidance should be provided to methodology developers on acceptable conservative approaches for such configurations. [3]

14. It is stated that the version of the methodological tool applies only to Article 6.4 activities undertaken at the project level and may be amended in the future to cover activities at other scales (e.g., programmes of activities, policies, sectoral approaches) once the standards for the development of mechanism methodologies (e.g., the "Standard: Setting the baseline in mechanism methodologies" (A6.4-STAN-METH-004) have been revised to incorporate other scales. Noting that the same methodology(ies) and associated application of the tool may get applied at project and PoA level, the need for such distinction should be clarified or the clause for interim till the PoA specific tool emerges may be excluded. [3]

2.4. Methodological approaches

15. The comprehensiveness of the document seems to be solid. However, for the reader and the user, the tool may seem confusing in which scenario, case, option what approach for OM and BM (or default) is eligible. To significantly enhance the readability and subsequently the usability of the tool, the MEP should consider having a table which gives an overview on the OM/BM approaches to be taken for scenario, case and options. This table is seen to be similar to Table 2 of CDM Tool 07. Add table highlighting eligible approaches for OM/BM for different scenarios, cases and options. The table envisioned is similar to Table 2 of CDM Tool 07. [1]

2.4.1. Step 1: Identify all relevant electricity generation and consumption sources s in relation to the Article 6.4 activity

16. Editorial change to paragraph 18:

*"This may include electricity generation and consumption **<u>of</u>** sources that occur in the project scenario and/or in the baseline scenario."* [4]

2.4.2. Step 2: Determine for each electricity generation or consumption source s whether the electricity is consumed from or fed into an electricity system or whether it is consumed from or avoids power generation by captive power plant(s)

17. Paragraph 20 uses the language which is too complex and some of the description of scenario C is not correct. It states that the Article 6.4 project can simultaneously be a production source and a consumption source. By introducing the concept of Captive Power Plant system (that include both the power generation unit as well as the consumers), the language can be very much simplified as indicated below:

"Scenario A: The electricity is ~~consumed from or fed into an~~ exchanged with an electricity system only;

Scenario B: The electricity ~~is consumed from or avoids~~ exchanged with a ~~power generation by a~~ fossil-fuel fired captive power plant system only; or

Scenario C: A combination of scenario A and B, ~~i.e., the electricity is consumed from or fed into an electricity system and consumed from or avoids power generation by a fossil-fuel fired captive power plant.~~ The electricity is consumed from (the A6.4 project is a *consumption source)* ***or*** *generated for (the A6.4 project is a production source) an electricity system* ***and*** *a CPP system."* [4]

18. Paragraph 21(b) is suggested to be modified to below:

"*This applies, for example:*

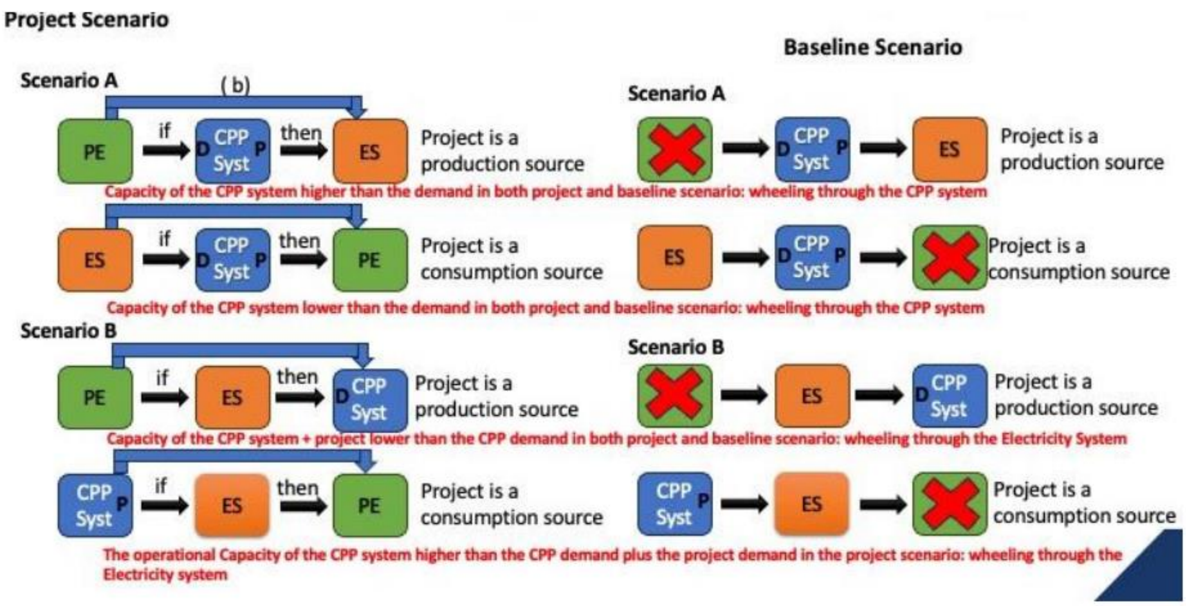
(i) If the project/baseline is a production source and at all times during the monitored period, the total electricity demand of the captive power plant(s) ***system*** *(the system includes the generation and the consumption part of the CPP) is larger than its generation capacity both in the project scenario and the baseline scenario. Any amount of electricity provided by the project/baseline equipment to the CPP system will lead to the CPP providing the same amount of electricity to the electricity system; or*

(ii) If the captive power plant in operation, it always operates at its maximum possible capacity and feeds any excess electricity into the electricity system, because the revenues for feeding electricity into the electricity system are above the plant operation costs; or

(iii) If the project is a consumption source, the production capacity of the CPP system is lower than the demand in both project and baseline scenario." [4]

19. Within the Paragraph 22(b), sub-para (i) is correct if the project does not exchange electricity with the electricity system, but only with the CPP system. This example does not prevent the implementation of the project not to affect the electricity system. The CPP system can provide electricity the electricity from the CPP can be displaced by the electricity from the electricity system. The project/baseline is a production source. The electricity generation capacity of the CPP system plus the capacity of the project/baseline is lower than the CPP demand in both project and baseline scenario. Any amount of electricity sent by the project/baseline equipment to the Electricity System and not to the CPP system will lead to the same amount of electricity send by the Electricity System to the CPP system: this is wheeling through the Electricity System. The project is a consumption source. The operational capacity of the CPP system is higher than the CPP demand plus the project demand in the project scenario. It is attractive to run the CPP at its maximum capacity. Any amount of electricity consumed by the project from the Electricity System will lead to the CPP sending the same amount of electricity to the Electricity system: this is wheeling through the Electricity system. [4]

Figure 1: Illustration of the concept of CPP conceived as a system



2.4.3. Step 3: Identify the relevant electricity system(s)

20. Section 5.3 is only naming the grid, without documenting dispatch structure or boundary justification. Therefore it is suggested to:

    (a) Insert a dedicated subsection requiring the activity participant to describe the project electricity system boundary,

    (b) identify the relevant dispatch centre(s), assess transmission constraints as per paragraphs 27–30, and specify when the boundary assessment will be updated. [2]

21. In Paragraph 26, the use of [boundary] is probably more appropriate as this terminology is consistent with the concept of project boundary. As such, the below paragraph is suggested instead:

    “Activity participants shall delineate the project electricity system and any connected electricity system(s) and document the geographical boundary of the project electricity system and any connected electricity system transparently.” [4]

22. For Paragraph 29(b)(iii), the below sentence is suggested instead:

    *“If the cumulative hours in which the conditions in sub-paragraph (ii) are met account for ~~no~~ **90 % or more** ~~than 10%~~ of the hours within the assessment period, it is determined that no transmission constraint exist.”* [4]

23. Editorial change to paragraph 29(c):

*"Paragraph 29 (c): The transmission capacity of the transmission line(s) between the two independent dispatch centres is more than 10 per cent of the installed power generation capacity **of** the independent dispatch centres which is smaller."* [4]

24. In Footnote 8, there is an editorial mistake changing the meaning of the requirement. It should be changed to the below:

"If the number of hours during which the total operating capacity of the line is higher than 150 exceeds 876 for an even year and 878 for a leap year, it shall be considered that ~~no~~ transmission constraints exist between the two independent dispatch centres in that year. Otherwise, no transmission constraint exist." [4]

25. Giving DNA's the opportunity to define the extent of the PES allows to reflect the regional character of some power systems, such as the Southern- and West-African power systems. This is an important design element, however the national GHG inventories, BTRs and related NDC targets are developed based on IPCC good practice guidance, which is per se a production based approach and using a regional approach may result in complications when a country gives a corresponding. adjustment to a mitigation activity. It is hence recommended to produce an additional background note for DNAs on possible implications and recommendations, such as including the emissions of electricity imports in BTRs and NIDs to enable them to make informed decisions on giving CAs to mitigation activities using a regional GEF. [5]

2.4.4. Step 4: Determine whether applying a higher or a lower value for the emissions from electricity generation or consumption is more conservative

26. The determination of whether higher or lower emission factors are conservative (Case 1 vs Case 2) may be challenging in complex projects involving (i) mixed generation/consumption, (ii) partial export/import to grid, and (iii) dynamic operational patterns. It is proposed to include (i) worked examples illustrating Case 1 vs Case 2 decisions, and (ii) clear decision trees or flowcharts to reduce interpretation risk and validation disputes. [2]

27. The rationale of paragraph 33 does not depend on the source but on whether we are dealing with project or baseline related emissions as stated in para 32. As such, the below paragraph is suggested instead:

"~~Activity participants shall determine and justify,~~ For each electricity generation ~~or~~ ***and*** *consumption source s, Case 1 applies for project related emissions or and Case 2 applies for baseline related emissions. ~~This determination shall be based on the specific circumstances of the Article 6.4 activity and its corresponding baseline.~~"* [4]

28. Paragraph 34 talks about the net total electricity generation and also about differentiating on an hourly basis the Case 1 (higher emissions) and Case 2 (lower emissions) with example of landfill gas activity (footnote 11). The practicality of such an approach and the incremental benefit (if any) from such an approach is questionable. Further, in instances wherein the electricity system emission factor is provided by the government authority the differentiation for case 1 or case 2 may not be made available. As such, the hourly differentiation for Case 1 and Case 2 should be removed. Further, the Case 1 and Case 2 differentiation in context of electricity system should be removed. [3]

29. Regarding paragraph 35, calculating different OM and BM for baseline and project emissions within the same project activity may place undue burden on activity participants. [4]

30. Regarding paragraph 35, noting that generally for power plants the auxiliary consumption is about 10% (and even less as in case of wind or solar), the percentage herein could be stated as 10%. As such, the below paragraph is suggested instead:

"This approach may also be applied where one of the two cases makes up less than 10 per cent of the amount of electricity generation and/or consumption compared to the other case." [3]

2.4.5. Step 5: Determine the amount of electricity generation or consumption

31. Misalignment between electricity quantity aggregation period and EF determination is common. As such, it is suggested to require confirmation that the electricity generation or consumption aggregation period aligns with the EF time resolution, and justification where conservative zero values are applied under paragraph 39. [2]

2.4.6. Step 6. Determine which emission factor is applicable

32. It is stated that emission factor for the electricity system under Case 1 and Case 2 respectively are to be applied. However, in instances wherein the electricity system emission factor is not computed by the activity participant and is directly provided by the government authority the differentiation for case 1 or case 2 may not be made available. As such, the Case 1 and Case 2 differentiation in context of electricity system should be removed. [3]

2.4.7. Step 7: Determine the emission factor of the electricity system, where applicable

33. The introduction of discounts for historical OM/BM data to reflect increasing renewable penetration is conceptually strong. However, the tool does not yet specify the discount magnitudes, the calculation methodology and any regional differentiation. Prioritize finalizing and publishing:

(a) Default discount factors,

(b) Transparent calculation logic,

(c) Regional or system-type differentiation where possible. [2]

2.4.7.1. Emission factor of electricity system - Consideration of power plants or units

34. Regarding paragraph 48, No two power units may in practice have exactly the same operational efficiencies. Hence providing some typical technology specific efficiency ranges as the basis for aggregating several power units into one power plant would be a helpful guidance. This issue is of particular significance for calculating dispatch data analysis OM and simple adjusted OM. [4]

2.4.7.2. Emission factor of electricity system – Treatment of electricity imports and exports

35. The language used in Paragraph 49 is a bit imprecise. As such, the below paragraph is suggested instead:

"Any net electricity imports from a connected electricity system to the project electricity system during the relevant period shall be treated as a power unit p supplying electricity to the project electricity system. The emission factor for such net electricity imports shall be determined for the period (e.g., hour h for the dispatch data OM, or relevant period t for other methods) using one of the following options:" [4]

36. The language used in Paragraph 49(a) is confusing. What is meant by exporting electricity system is not clear. Specially given the definitions in paragraph 31. As such, the below paragraph is suggested instead:

"Determine the emission factor for the exporting connected electricity system as the combined margin emission factor of the electricity system as per this section (section 5.7.1);" [4]

2.4.7.3. Emission factor of electricity system – General requirements for determining CO_2 emission factors of power units

37. Regarding Equation 1, the descriptions of the variables are not fully readable. Under wheeling mechanism of electricity grid is used by a renewable energy project activity just as a medium of transfer of electricity from point of generation to a specific point of use and grid is not the user. Such plants, although grid connected, should not be considered in calculation of operating margin. We propose to insert a footnote that the electricity supplied via wheeling should not be accounted for the calculation of OM. [4]

38. Regarding Equation 2, *i* cannot be at the right side of the equation and not at the left side. There is no need to identify the fuel with the letter *i*. As such, it is suggested that Equation 2 is changed to:

"$EF_{EL,p,t} = EF_{CO2,p,\not{i},t} \times 3.6 / \eta_{p,t}$

$EF_{CO2,p,\not{i},t}$ = Average CO2 emission factor of the fuel ~~type i~~ used in power unit p in period t (t CO_2/GJ)" [4]

39. Paragraphs 53-54 eliminate a broad range of methodologies that could possibly come with requirement to address the issue of environmental integrity foreseen while ensuring we do not miss opportunities to incentivize good mitigation projects. As such, the below paragraph is suggested instead:

"53. Where biomass or biomass-derived fuels are consumed by a power unit p, use for Case 1 the default values for fNRB as per the "TOOL33: Default values for common parameters", ~~higher value within a plausible range of emission factors, assuming~~ if it can be established that the biomass is not renewable, and for Case 2 use the default emission factors for fNRB. as per the "TOOL33: Default values for common parameters ," if it can be established that the biomass is not renewable, or use an emission factor of zero."

"54. Where hydrogen or hydrogen-derived fuels are consumed by a power unit p, use for Case 1 the higher value within a plausible range of emission factors, assuming that the hydrogen would be produced from fossil fuels without carbon capture and storage, and for Case 2, the methodology either develop an approach to establish that the hydrogen is green and did not lead to leakage or use an emission factor of zero." [4]

2.4.7.4. Emission factor of electricity system – Determination of the Operating Margin (OM) emission factor

40. Several OM options assume access to hourly dispatch data, information on must-run units and periods when systems operate solely on renewable/nuclear/storage. Such data is often non-public or inconsistent across jurisdictions. It should be clarified:

(a) Acceptable data proxies;

(b) Use of system operator reports or secondary datasets,

(c) Conditions under which conservative assumptions may replace unavailable dispatch data. [2]

41. OM method selection is usually stated without demonstrating compliance with applicability conditions. Therefore it is suggested that the methodological tool should require explicit justification of the selected OM method, confirmation that applicability conditions in paragraph 57 are met, and explanation for exclusion of other OM methods. [2]

42. Regarding Table 3, it is advisable that the tool provides a clear step-wise procedure on how to apply the IPCC guidance on combining uncertainties to determine one common uncertainty value for each of these OM estimation methods. [1]

43. Must-run classification is often implicit or undocumented in the document. As such, it is suggested that the methodological tool should add a mandatory table listing each power unit, its must-run status, applicable criteria under paragraph 59, data sources used, and justification. [2]

44. The ex-ante and ex-post option for Simple OM and Average OM is cited in para 72, whereas the subsequent para 95 states annual update of BM for first crediting period. Uniformity of approach should be applied for both OM and BM. [3]

2.4.7.5. Emission factor of electricity system – Dispatch data OM

45. The dispatch data OM method is presented as the most accurate approach but requires detailed, hourly unit-level dispatch data and transparent dispatch order information. In many developing countries, such data are not publicly available or are incomplete. As a result, activity participants in these contexts are more likely to rely on simplified methods or conservative defaults, leading to structurally lower credited emission reductions compared to projects in data-rich systems. We recommend introducing a clearer tiered approach, analogous to IPCC Tier methodologies, such as:

(a) Tier 1: Standardized or nationally approved grid emission factors;

(b) Tier 2: Simplified OM/BM approaches with safeguards;

(c) Tier 3: Full dispatch-based approaches where data permit. [3]

46. Regarding Table 3, dispatch is an optimization problem, not a fixed sequence. Under normal conditions, system operators dispatch generation broadly following this order to meet demand at least cost. In practice, dispatch does not always strictly follow one fixed sequence, because several factors intervene such as technical constraints, security and stability requirements, hydro and storage optimization, market design and rules, out-of-

merit dispatch. As such, it is suggested that Applicability conditions for Dispatch data OM method in Table 3 should be changed to:

"Power units in the electricity system are dispatched in a certain order subject to technical, spatial, temporal, and security constraints." [4]

2.4.7.6. Emission factor of electricity system – Simple OM

47. Determination of this X percentage could be a bit contentious. One way is to determine X percentage could be by essentially splitting number of countries into half and the percentage of grid electricity generation served by the RE. i.e., the percentage of grid RE that would be split 194 signatory to paris agreement into 97 on each side 97 countries have RE generation in the grid higher than X percent and 97 countries having RE generation in the grid lower than X percentage. To be determined, and probably needs to be updated every 3 years. [1]

48. For the value of X, it could be analysed trend for past 5 years, the global electricity generation increase in RE vs the net increase in electricity generation from all other sources (including coal, gas, fuel oil and nuclear). This could be put linearly, to give a reasonable factor increase. To be determined, and probably needs to be updated every 3 years. [1]

49. Paragraph 72 states that "the simple OM emission factor shall be determined as an annual emission factor for each calendar year of the crediting period." However, at the same time, it allows an Ex ante option where the emission factor is determined once for the entire crediting period. This may be interpreted ambiguously and could lead to inconsistent interpretation. As such, it is suggested that the methodological tool should clarify whether the simple OM emission factor:

    (a) requires annual recalculation,

    (b) may be applied as a single ex ante value across all calendar years, or

    (c) requires separate ex ante values to be calculated for each calendar year at validation. [2]

2.4.7.7. Emission factor of electricity system – Simple adjusted OM

50. Paragraph 81 is inconsistent with the text of paragraph 83. Only Option 1 (simple adjusted OM based on hourly data) of Options 1 and 2 (simple adjusted OM based on annual data) of the Simple adjusted OM is applicable for all cases, not both options. [4]

51. Paragraph 85(b) is inconsistent with paragraph 83, which mandates exclusion of intermittent sources of electricity. [4]

2.4.7.8. Emission factor of electricity system – Average OM

52. The text in paragraph 88 is inconsistent with paragraph 87 (a), which excludes intermittent sources of electricity in the calculation of average OM. The definition of must run power units in the tool (para 59 (b)) includes intermittent electricity sources, such as wind or solar power plants. [4]

2.4.7.9. Emission factor of electricity system – Build Margin (BM)

53. In Equations 10-11, y is explicitly at the left side of the equation and not at the right side. It is suggested to add one more ∑ in the beginning to calculate power unit emissions for historical years depending upon the years for which the data is available t can be assigned values e.g. ∑ has a range from t = (y-m) to (y-n) for which data is available. [4]

54. Paragraph 93 is suggested to be changed to the below:

"For Case 1, a value of zero shall apply to the parameter FBM,(likely annual decrease in BM emission factor) as a simplified and reasonably conservative approach. For Case 2, a value of [X] shall be applied" [4]

2.4.7.10. Emission factor of electricity system – Combined Margin (CM)

55. While the tool includes discounting and updating rules for OM and BM emission factors, it does not explicitly address rapid power-sector transitions driven by policy reforms, coal retirements, or structural market changes. Projects implemented in fast-transition systems may face disproportionate discounting over their crediting periods, potentially undermining early-mover incentives. We encourage the SB to consider additional guidance on:

    (a) Handling policy-driven structural changes in the power sector;

    (b) Aligning baseline evolution with nationally articulated transition pathways;

    (c) Ensuring consistency with national decarbonization strategies and long-term low-emission development strategies (LT-LEDS). [3]

56. Regarding Equation 12, it is suggested to replace t with y, the signification of t vary from one formula to another. In this formula, y should replace t, $EF_{BM,t}$ should be $EF_{BM,y}$. $EF_{OM,y}$ will be equal to $EF_{OM,t}$. As such, the CM emissions factor shall be calculated as follows:

$EF_{CM,y} = EF_{OM,y} \times w_{OM} + EF_{BM,y} \times w_{BM}$ [4]

57. Regarding Table 4, whether OM or BM is displaced depends on the type of grid and baseline scenario. Whether grid is surplus or deficit and what would happen in the absence of the incentive instrument? Would still an investment occur (BM)? Or not (OM). Also, what should be weights between OM and BM for pure energy efficiency projects? The below table was provided: [4]

Table 1: Default values for w_{OM} and w_{BM}

Conditions	Justification	w_{OM}		w_{BM}	
		Mean	Uncertainty	Mean	Uncertainty
1a. Deficit electricity grid with deficit in base load and peak load without significant instituional and/or investment barriers	In a fully deficit electricity grid (base load and peak load) where base load and peak load demand exceeds base load and peak load supply, and where investment climate is encouraging with a good economic activity in the country, we propose that more weight be given to BM than OM. This would be a realistic approach given that in a deficit grid the Art 6.4 project activity is less likely to displace existing plants but future investments. The situation needs to be monitored if the grid becomes surplus grid in future to be able to change the weights (See 2a scenario).	0.25	[X]	0.75	[X]
1a. Deficit electricity grid with deficit in peak load without significant instituional and/or investment barriers	In a partially deficit electricity grid (peak load only) where peak load demand exceeds peak load supply, and where is investment climate is encouraging with a good economic activity in the country, we propose that weight of BM is higher than OM, but to a lesser extent than case 1a. This is because Art 6.4 project activity may displace some existing plants during base load period in addition to future investments. The situation needs to be monitored if the grid becomes surplus grid in future to be able to change the weights (See 2a scenario).	0.40	[X]	0.60	[X]
1c. Deficit electricity grid with significant instituional and/or investment barriers	In a deficit electricity grid that suffers from significant instituional and/or investment barriers, we propose that the OM weight be 0.75 and the BM weight be 0.25. This would be a realistic approach given that Art 6.4 project activity is less likely to displace future investments, and it is likely that existing energy mix would continue to supply and due to deficit, consumer would have used high carbon intensive off-grid means to satisfy the demand. The situation needs to be monitored if the grid becomes surplus grid in future to be able to change the weights (See 2a scenario). To apply these weights, activity participants must substantiate that due to the presence of significant institutional and/or investment barrier there would be very low incentive to invest to generate the amount of electricity of the project in the absence of carbon finance incentive because it is a key driver for the decision to invest or not invest. Some examples of instituional/investment barriers that can be prohibitive for investments in new power plants in an electricity grid are provided below. • High curtailment risk for renewable energy projects • A below cost tariff • High WACC • High foreign currency risk	0.75	[X]	0.25	[X]
2a. Surplus electricity grid without any significant instituional and/or investment barriers	For a suplus electricity grid (baseload and peak load) that does not suffer from any significant instituional and/or investment barriers, we propose the equal weight for OM and BM. This would be realistic, given that Art 6.4 project activity is likely to displace existing plants and competing future investments in the same proportion. New capacity additions to meet increasing demand to the grid also does not face any major institutional and/or investment barrier. Some markers for a surplus electricity grid without any significant instituional/investment barriers are provided below: • Long term enforcebale PPA • Credit-worthy and guaranteed offtaker • Firm evacuation capability • Low curtailment risk for renewable energy projects • Stable regulatory environment • Low foreign currency risk	0.5	[X]	0.5	[X]
3.Pure energy efficiency projects (Art 6.4 project activity on consumer side)	We propose that 100% of the weight of OM for pure energy efficiency projects only on ex-post basis. Greenfield or brownfield EE projects generate emission reductions (project emissions – baseline emissions) solely from reduction of consumption on energy received in that year/hour. This approach is more realistic (although may appear to be a bit less conservative) at any given time emissions from a pure energy eficiency projects only depends on the operational power plants of a grid. BM has no role when it comes to emission factor for EE projects.	1	[X]	0	[X]

2.4.7.11. Emission factor of electricity system – Conservative default factors

58. It is stated that the default emission factor depending upon the share of electricity generation from renewable (excluding solar and wind) and nuclear energy in the electricity system. The reason for excluding solar and wind is unclear and should rather be removed. The stated values too for Case 1 are on much higher side noting current grid emission factors across different geographies and their respective grid mix. In certain geographies around 90% of total electricity generation is hydro-based and therein the use of such default factors would not be appropriate either. Therefore, it is suggested to delete "(excluding solar and wind)" in Paragraph 102-104. [3]

2.4.8. Step 8: Determine the emission factor for electricity sourced from captive fossil fuel power plants

59. Equation 14 is not correct. It makes the assumption that the quantity of heat co-generated has the same value as equal amount of heat produced from fuel combustion in a boiler, which is not correct as the 2 amounts of heat do not has the same exergy. Two heat flows with the same energy but different temperatures are not equivalent, because high-temperature heat can be converted into much more useful heat or work, while low-temperature heat cannot. Suppose you burn fuel and get 100 units of heat at high temperature. You can use that heat to run a heat pump and obtain 300 units of useful low-temperature heat (COP = 3) But if you start with 100 units of low-temperature heat, you get 100 units of useful heat – no amplification possible Same fuel. Same energy quantity. Very different outcomes. Therefore, Equation 14 is conservative for project emissions but not for baseline emissions. [4]

2.4.9. Step 9. Determine the transmission and distribution losses from the electricity system, where applicable

60. The tool allows inclusion of non-physical losses (e.g., pilferage) only if conservative. However, determining conservativeness ex ante may be subjective. It is proposed to include clearer guidance or default treatment for non-technical losses, especially in countries where they form a significant share of total losses. [2]

61. Table 5 does classify TDL based on voltage of the system, however does not define what is considered as low, medium or high voltage. Inclusion of voltage ranges for what is classified as low, medium and high voltage. [1]

62. The voltage level value in Table 5 are not defined to classify as High voltage (HV), Medium voltage (MV) and Low voltage (LV). Further, as the consumption likely would be at low voltage, the differentiation of HV, MV and LV is unclear. It should be clarified that T&D losses are only to be applied in context of consumption and not generation. [3]

2.4.10. Uncertainty

63. Several default values and uncertainty parameters in the draft tool are placeholders and are not explicitly linked to national circumstances or official data sources. Overly conservative defaults, if widely applied, may function as implicit penalties rather than safeguards, particularly in least-developed countries or small electricity systems. We recommend that conservative default values:

    (a) Be calibrated using national grid emission factors reported in national GHG inventories or official utility statistics;

    (b) Be periodically updated (e.g., every 2–3 years);

    (c) Be transparently linked to national data where available, while retaining conservative buffers. [3]

64. It is indicated that the uncertainty of emissions or emission factors shall be determined following the guidance of Volume 1, Chapter 3 of the 2019 Refinement of the 2006 IPCC Guidelines. The uncertainty section in the given context with mostly the emission factors being used from IPCC with upper/lower bound and further noting the conservativeness already built in the earlier steps it would pose unnecessary burden and deduction of

emission reductions and thus should be removed. Also noting that the tool is in context of CO2 emissions and with reference to Table 3.4 of Volume 1, Chapter 3 of the 2019 Refinement of the 2006 IPCC Guidelines, the indicative combined uncertainty for same is fairly low. It is recommended to remove/simplify the determination of the uncertainty. [3]

65. Regarding paragraph 123, the uncertainty section in the given context with mostly the emission factors being used from IPCC with upper/lower bound and further noting the conservativeness already built in the earlier steps it would pose unnecessary burden and deduction of emission reductions and thus should be removed. Also noting that the tool is in context of CO2 emissions and with reference to Table 3.4 of Volume 1, Chapter 3 of the 2019 Refinement of the 2006 IPCC Guidelines, the indicative combined uncertainty for same is fairly low. The uncertainty determination is to be removed/simplified. [3]

2.5. Monitored parameters

66. Regarding Tables 1, 2, and 6, electricity meters are specified as the primary measurement source for monitoring electricity generation and consumption. However, in captive generation systems, EMS or real-time energy monitoring systems are often used as the primary basis for energy accounting and billing especially in case of hybrid systems. Clarification would be useful on whether such systems may be considered acceptable data sources in captive generation contexts. As such, it is suggested that the methodological tool should:

(a) Clarify whether EMS or real-time energy monitoring systems may be accepted as data sources for monitoring electricity generation, consumption, and net delivered electricity in table 1, 2 and 6, and

(b) Specify that such systems may be used provided the readings can be cross verified using calibrated meters and are subject to appropriate QA/QC procedures. [2]

67. Regarding Data/Parameter table 9., a more conservative approach would be 30 percent as the default value for Case 1, and 62 percent as the default value for Case 2. As such, it is suggested to change the last sentence in the "Measurement methods and procedures" cell to the below:

"30 per cent as the default value for Case 1 and 62 per cent as the default value for Case 2" [4]

Appendix. List of submissions

1. The following table contains the list of submissions used in this information note.

Table 1. List of submissions received

Submission #	Stakeholder	Submission date
1	Chetan Aggarwal (Climate Spring)	28 December 2025
2	Karan Kumar (Value Network Ventures)	29 December 2025
3	Harikumar Gadde (The World Bank)	30 December 2025
4	Kishor Rajhansa & Massamba Thioye (Global Carbon Council)	31 December 2025
5	Martin Burian & Francis Masawi	31 December 2025

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Document information

Version	*Date*	*Description*
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