



**Approved baseline and monitoring methodology /
methodological tool clarification response form
(Version 03.0)**

INFORMATION TO BE COMPLETED BY THE SECRETARIAT OR PANEL / WG

Date and number of Panel / WG meeting:	23 – 26 September 2019 / MP 80
Title/Subject of the request for clarification:	Clarification request on Applicability of AMS.III.B for a component of project activity with 10 – 25% use of electricity at the baseline
Reference number of the request for clarification:	SSC_763
Exact reference (number, title and version) of the methodology or methodological tool to which the request for clarification applies:	AMS-III.B.: Switching fossil fuels ---Version 18.0 AMS-III.AG.: Switching from high carbon intensive grid electricity to low carbon intensive fossil fuel --- Version 03.0 AMS-III.AH.: Shift from high carbon-intensive fuel mix ratio to low carbon-intensive fuel mix ratio --- Version 3.0
Fast track or Regular track:	<input type="checkbox"/> Fast track <input checked="" type="checkbox"/> Regular track

Summary of the request for clarification

Original text from the Stakeholder:

We are in the process of trying to register a PoA along with two CPAs. One of the two CPAs is the; 'Fossil Fuel Switch at Chicason Group Captive Power Generation' developed by Chicason Group, an indigenous company in eastern Nigeria. The project is located at RIMCO Drive, Chicason Avenue, Akwu Uru Industrial Estate, Nnewi, Anambra State, Nigeria.

The purpose of the CPA is to replace the use of diesel fuel, a highly carbon intensive fossil fuel in the existing diesel generators located at the various companies (within the group) with central gas generators that will use a lesser carbon intensive fossil fuel (natural gas) by means of gas and as such contribute to the reduction of GHG emissions. The ability to make this conversion is due to the operation of the Greenville virtual pipeline that will allow for natural gas to reach the facility as gas infrastructure is not readily available and grid electricity in the vicinity is highly unreliable.

AMS III.B

The methodology applied is the AMS III.B and the following paragraph of the methodology are the concerns particularly para 12:

11. The facility may involve grid connected element processes. However, under this methodology project activities that export electricity to a regional and/or national grid (hereinafter mentioned as grid) may:

(a) Not claim emission reductions for the grid component; or

(b) Claim emission reductions for the grid component, provided that they have operational history of three years and the installed capacity of the project element process supplying electricity to the grid is up to or equal to 15 MW. Greenfield and capacity -addition are not covered under this category.

12. This methodology does not cover emission reductions on account of shift from use of grid electricity (e.g. shift from a carbon intensive grid to a low carbon intensive fossil fuel). In such a case, other applicable methodologies such as "AMS-III.AG: Switching from high carbon intensive grid electricity to low carbon intensive fossil fuel" might be explored.

CPA project does not intend to export electricity to the grid, hence the applicability 11 is not applicable. Due to the peculiarity of situation in Nigeria where grid electricity is not reliable, the use of Diesel generation is mostly used to meet electricity demand needs, however electricity from the grid is used as a supplement

and not a major source. The criteria 12 as per the methodology refers to the switch off from grid, and our position is that although the CPA project seldom use electricity from the grid, which is about 10-25%, the portion of emission we are accounting for is for the period only when the diesel is operational i.e. for the captive only.

AMS III.AG

The alternative methodology considered is the AMS III.AG and the following paragraph of the methodology are the concerns;

Typical project type: Switch from high carbon grid electricity to electricity generation using less carbon-intensive fossil fuel such as captive natural-gas-based power generation. This methodology comprises switch from a carbon intensive energy source (or mix or energy sources) to a single or multiple low carbon intensive energy source/s in existing and new applications.

This methodology is applicable only if the sole energy or one of the energy sources in the baseline is a high carbon intensive grid electricity (e.g. switch from a diesel based captive electricity generation complemented by a grid electricity import to a natural gas based captive electricity generation).

In both referenced paragraph on the applicability of the methodology AMS III.AG, the word high carbon intensive grid is stressed. Knowing that in country grid electricity generation is predominantly natural gas fired and hydro plant, it is not quite certain to say that the grid in the country can be classified as a higher carbon intensive grid considering the fact that it will be seen as switching from a gas-based grid to a gas generator.

We like to have your clarification to move forward on the process on issues around methodology to try and get this project registered. Attached is a short note on this.

Additional information requested [13/09/2019]

The Meth Panel requests the stakeholder to provide additional information as follows:

- Applicability of AMS-III.B.** – In case the baseline is partial consumption of electricity generated by diesel based captive power plant and grid electricity, stakeholder need to provide data (preferably for last 3 years) on share of usage of electricity from captive plant and grid. Also, stakeholder need to confirm/provide estimate of the share of usage of electricity in project scenario.
- Applicability of AMS-III.AG.** – In case the baseline is use of grid electricity AMS-III.AG might be applicable, however, further information regarding share of fuels used in project scenario is required to know. As per foot note 1 of the meth, 'Multiple fossil fuels in the project scenario are only allowed if the primary low carbon intensive fuel amounts to at least 80 per cent of the total equivalent annual energy input and other fossil fuels are only used only in situations where the primary fossil fuel is not available.'
- Applicability of AMS-III.AH.** – The author of submission may also like to check whether another small-scale methodology "AMS-III.AH: Shift from high carbon-intensive fuel mix ratio to low carbon-intensive fuel mix ratio" is applicable for their project activity.

Stakeholder's reply [17/09/2019]

1. Applicability of AMS-III.B. –

The data below shows the share of electricity consumption at the baseline scenario for the year 2016-2018. Based on discussion with the project developer and data received the share of grid is as high as 41%. It is important to note that in the project scenario, there will be no in-take of electricity from the grid. All electricity required will be generated on-site from the captive gas generator to be installed onsite.

YEAR 2016	CAPTIVE		Grid	TOTAL KWH
	DIESEL(LITRES)	ENERGY(KWH)	ENERGY(KWH)	
AA	1,311,136.00	3,870,145.00	1,480,800.00	5,350,945.00
RAP	947,609.30	3,472,361.71	1,357,190.00	4,829,551.71
TOTAL	2,258,745.30	7,342,506.71	2,837,990.00	10,180,496.71
Comparison of Captive to Grid		72%	28%	

YEAR 2017	CAPTIVE		Grid	
	DIESEL(LITRES)	ENERGY(KWH)	ENERGY(KWH)	TOTAL KWH
AA	1,613,689.00	3,760,102.36	1,058,300.00	4,818,402.36
RAP	827,082.03	3,157,523.09	1,167,970.00	4,325,493.09
TOTAL	2,440,771.03	6,917,625.45	2,226,270.00	9,143,895.45
Comparison of Captive to Grid		76%	24%	

YEAR 2018	CAPTIVE		Grid	
	DIESEL(LITRES)	ENERGY(KWH)	ENERGY(KWH)	TOTAL KWH
AA	1,186,217.00	2,536,689.17	1,633,000.00	4,169,689.17
RAP	541,896.03	1,724,635.06	1,322,430.00	3,047,065.06
TOTAL	1,728,113.03	4,261,324.23	2,955,430.00	7,216,754.23
Comparison of Captive to Grid		59%	41%	

2. Applicability of AMS-III.AG. –

The project scenario will only use natural gas as its fuel source. From our understanding of the methodology, the use of multiple fuel sources is not applicable. An area of concern is on the paragraph 2 of the methodology that states:

*This methodology comprises switch from a carbon intensive energy source (or mix of energy sources) to a single or multiple¹ low carbon intensive energy source/s in existing and new industrial, residential, commercial, and institutional for electricity generation applications. **This methodology is applicable only if the sole energy source or one of the energy sources in the baseline is high carbon intensive grid electricity** (e.g. switch from a diesel based captive electricity generation complemented by a grid electricity import to a natural gas based captive electricity generation).*

The Nigeria grid is predominantly natural gas (80%) and Hydro (20%). Hence may not be applicable in this case as one of the energy sources (natural gas) is at the baseline is carbon intensive grid.

3. Applicability of AMS-III.AH. –

The project developer has considered the applicability of the AMS-III.AH. bearing in mind that a single fuel is used both at the baseline (diesel) and project scenario (natural gas) it is not certain if this methodology fits the project activity. Also, it needs to be stressed that grid electricity is consumed at the baseline scenario.

Clarification by the secretariat or Panel / WG

The Methodologies Panel (Meth Panel) of the CDM Executive Board would like to thank the author for the submission. The Meth Panel clarifies as below.

The Meth Panel noted that during recent three years (2016 to 2019), the project has used diesel and grid electricity to meet the electricity demand. Based on annual average of electricity consumption, percentage share of diesel is 69% and grid is 31% in the baseline electricity consumption. It is also noted that in the project scenario electricity demand will be met using gas-based captive power plant and there will not be

any electricity import from grid except in emergency situations. It is also noted that grid electricity emission factor for Nigeria which is one of the West African Power Pool (WAPP) countries is 0.562 tCO₂/MWh.¹

Meth Panel checked the applicability of following three small-scale methodologies for the CPA. Meth Panel's analysis is presented as follows:

Applicability of AMS-III.B.: Switching fossil fuels, version 18.0, (AMS-III.B.) – As per para 12 of this methodology, it does not cover emission reductions on account of shift from use of grid electricity. The baseline scenario of the project activity involves use of grid electricity, and in recent 3 years grid electricity has a share of 31% that will be replaced in the project scenario by gas-based electricity. Therefore, AMS-III.B. is not applicable for this case.

Applicability of AMS-III.AG.: Switching from high carbon intensive grid electricity to low carbon intensive fossil fuel, version 3.0 (AMS-III.AG.) – This methodology is not applicable to the project activity since the project does not meet the requirements from para 2 of the methodology, i.e. one of the energy sources in the baseline should be a high carbon intensive grid electricity, however the Nigerian grid is not a 'high carbon intensive grid' as its emission factor is 0.562 tCO₂/MWh.

Applicability of AMS-III.AH.: Small-scale Methodology: Shift from high carbon-intensive fuel mix ratio to low carbon-intensive fuel mix ratio, version 3.0 (AMS-III.AH.) – Another small-scale methodology, AMS-III.AH. is also not applicable to the project activity as the project activity consumes different fuels in baseline (diesel and grid) and project scenario (Natural gas). The methodology as per the scope, is applicable for increasing share of low GHG intensive fossil fuel, i.e. fuels used in baseline should be used in project case, however, with different shares. For example, substitution of heavy fuel oil (HFO) engine with a Natural Gas (NG) engine to shift to a low GHG intensive fuel mix ratio of 25:74:1 (HFO: NG: Diesel) from a baseline fuel mix ratio of 69:30:1 (HFO: NG: Diesel) on an annual basis is allowed under this methodology.

Noting this analysis, the Meth Panel suggests the stakeholder to submit a request for revision of AMS-III.AG. or AMS-III.AH. following requirements in the 'Procedure: Development, revision and clarification of baseline and monitoring methodologies and methodological tools'. Further, the request for revision should highlight the changes needed in the applicability criteria of the methodology, in the calculation of baseline emissions and project emissions, and in the monitoring methodology including additional monitoring requirements for newly added monitoring parameters. Alternatively, the stakeholder may also submit a new methodology for further consideration of the Meth Panel as per above-mentioned procedure.

Version(s) of the approved methodology / methodological tool to which the clarification is applicable:

AMS-III.B.: Switching fossil fuels ---Version 18.0

AMS-III.AG.: Switching from high carbon intensive grid electricity to low carbon intensive fossil fuel ---
Version 3.0

AMS-III.AH.: Shift from high carbon-intensive fuel mix ratio to low carbon-intensive fuel mix ratio ---
Version 3.0

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Document information

Version	Date	Description
03.0	13 May 2016	Revised to include the row "Version(s) of the approved methodology / methodological tool to which the clarification is applicable"

¹ Refer Standardized baseline for WAPP countries at
<https://cdm.unfccc.int/methodologies/standard_base/2015/sb102.html>.

<i>Version</i>	<i>Date</i>	<i>Description</i>
02.0	18 July 2013	Revised to remove the row “Date and signature of the chair and vice chair of Panel/WG (in case of clarification by Panel/WG)”
01.0	4 July 2013	Initial publication. This document supersedes and replaces the following documents: <ul style="list-style-type: none">• Recommendation Form for Small Scale Methodologies (F-CDM-SSCwg) (Version 01.1)• Recommendation Form for Small Scale A/R Methodologies and Procedures (F-CDM-SSC-AR) (Version 01.1)
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