

To be used by a designated national authority (DNA) when requesting update of an approved standardized baseline in accordance with the "Procedure: Development, revision, clarification and update of standardized baselines" (CDM-EB63-A28-PROC).

Reference (number, title and version) of the approved standardized baseline to which the request for update applies:

Name(s) of a Party or Parties to which the proposed updated standardized baseline applies:

DNA submitting this form:

Is the proposed updated standardized baseline submitted by a single Party or group of Parties?

☐ Single Party


☒ Group of Parties

Attachments:

- ☒ Proposed updated standardized baseline, highlighting the proposed changes to the approved standardized baseline
- ☒ A spreadsheet containing all data used and the calculations performed for the establishment of the proposed updated standardized baseline, where applicable
- ☒ A quality control report prepared in accordance with the "Guideline: Quality assurance and quality control of data used in the establishment of standardized baselines", where applicable
- ☐ An assessment report prepared by a designated operational entity (DOE) including elements such as details on the assessment process and assessment findings
- ☒ Additional documentation supporting the submission statistics and/or, studies, etc.), where applicable (Please specify: _____)
- ☒ Letters of approval on the proposed updated standardized baseline from all the DNAs of the Parties to which it applies (excluding the letter of the DNA submitting this proposed updated standardized baseline)

Name of authorized officer signing for the DNA:

Mr. Thiyu K. ESSOBIYOU

Date (DD/MM/YYYY) and signature for the DNA:	05 FEB 2021 	
Contact Information of the focal point(s) of the DNA: (Names, email-addresses and phone contacts for procedural and technical communication on the submission)	Mr. Thiyyu K. ESSOBIYOU Direction de l'Environnement 247, Rue des Nîmes, B.P. 4826, Lomé-TOGO Tél: (+228) 22 21 33 21 Mobile: (+228) 90 91 96 77 E-mail: denv.togo@yahoo.fr; essobiyou@hotmail.com; julesazakpo7@gmail.com; julesazakpo@yahoo.fr	
Name(s) of the proponent of the proposed updated standardized baseline:	Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, Niger, Nigeria, Senegal, and Togo	
Affiliation of the proponent: (The definition of "Admitted observer organization" can be found at http://unfccc.int/resource/ngo/art7_6.pdf)	<input checked="" type="checkbox"/> Party <input type="checkbox"/> Project Participant (PP) <input type="checkbox"/> International Industry Organization <input type="checkbox"/> Admitted Observer Organization	
Contact information of the focal point(s) of the proponent: (Names, email-addresses and phone contacts for procedural and technical communication on the submission. Not required to complete this section if the DNA(s) is(are) the proponent(s) of the proposed updated standardized baseline.)	See above	
Please provide below any additional information related to the proposed updated standardized baseline: <i>(e.g. how the proposed updated standardized baseline will be used with the relevant methodology(ies), justification for alternative length of the validity)</i>		
Following the guidance of Tool 7: Tool to calculate the emission factor for an electricity system, Version 7.0, the SB determines the specific emission factor of the regional electricity system i.e. in tCO ₂ /MWh. This value is expected to be used as follows: <ul style="list-style-type: none"> This allows grid connected CDM projects (i.e. renewable energy and energy efficiency) to determine their overall reduction of GHG emissions. This may be important for existing CDM projects (undergoing the renewable of their crediting period), for new projects, and may equally be picked up by voluntary emission reduction projects developed under the Verified Carbon Standard and the Gold Standard (i.e. both standards allow/ encourage the application of methodologies and tools developed under the CDM); Furthermore, the specific emission intensity, signed by all interconnected countries and approved under the UNFCCC auspices is a credible GHG benchmark. Hence, the SB may inform the development / implementation of innovative carbon programs structured under Article 6 of the Paris Agreement. 		

The SB specifies the specific emissions from electricity generation in nine interconnected countries, Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali, Niger, Nigeria, Senegal and Togo. Tool 7 §17a (Option 1) enables DNAs to decide on the spatial scope of the Project Electricity System (PES). In line with the technical scope of the WAPP transmission system, the DNAs decide that the PES comprises all interconnected WAPP member countries. The geographical scope of the SB remains unchanged.

The SB is conceived following the six steps, defined in Tool 7. This proposed update is consistent with the initial submission in its methodological choices i.e. i) off-grid is neglected, ii) the simple OM is applied and iii) the BM is conceived based on 'SET \geq 20 per cent).

The current EF is slightly higher than the initial submission. The increase may be related to those power plants which are covered by the BM, ii) an increase of oil and diesel-based generation from 8.8% to 17.9% and iii) during the development of this submission, emphasis was put on sourcing accurate data. Utilities were systematically invited to provide tier 3 NCVs as well secondary fuel consumption data. This leads to an accurate result.

In terms of validity, we propose a validity of five years. For a detailed justification, please refer to the Quality Report, §17-19.

An assessment report had been prepared by a Designated Operational Entity (DOE) for the original submission, considering that the current submission is an update the assessment report is not prepared. It will not have any impact as there is almost no modification to the list of utilities engaged in the data collection process, the methodological approach used is same and no changes to the interconnected system were identified. No site visits are involved in updating this SB which is in accordance with the procedures. The required data was collected and provided directly and officially by utilities, through the WAPP Secretariat for the desk review of the information to enable the update. The difference observed between the previous value and the updated value is not significant. In particular, the approved combined margin CO₂ emission factor for the project electricity system for wind and solar power generation project activities are 0.561 tCO₂/MWh (previous) and 0.567 tCO₂/MWh (updated) respectively.

Despite the coordination and management challenges faced during the preparation of this submission, all 9 DNAs have made great efforts and have managed to submit the updated SB within the time frame indicated by the CDM Executive Board.

FINDINGS AND RESOLUTIONS

Reference number of the request for update:

ASU0006 "Standardized Baseline: Grid Emission Factor for the West African Power Pool

To be used when requesting further input or providing the requested input in accordance with the "Procedure: Development, revision, clarification and update of standardized baselines" (CDM-EB63-A28-PROC).

No.	Request for Input <i>(To be filled by the secretariat, two selected members of the panel/working group or the panel/working group)</i>	Response <i>(To be filled by the DNA and proponent)</i>	Assessment of the response <i>(To be filled by the secretariat, two selected members of the panel/working group or the panel/working group)</i>																																			
1	<p>Date – (20/01/2021)</p> <p>The DNA missed to submit the source files for the generation and fuel consumption records for all the plants included in the calculation. Submission of the source files are essential for the secretariat to validate the primary data that is used for calculation of grid emission factor. The DNA is requested to submit background data files/source files from the respective utilities that contain information reg. yearly power plant generation for the period 2015 to 2019 and yearly fuel consumption data for the period 2017 to 2019. If the DNA or person authorized by it has collected the primary data from utilities via emails, then DNA may submit a copy of email communication and or its attachments from the utility confirming that the primary data is collected by the respective utilities.</p>	<p>Date – (28/01/2021)</p> <p>The data was reported by utilities and regulators in form of excel files and pdfs using a common structure for data collection. We have compiled these files in a folder.</p> <p>To support the validation of the data, source, we have compiled a sample of email communications, through which the utilities / regulators submitted the data.</p>	<p>Date – (DD/MM/YYYY)</p> <p>Assessment of DNA's response –</p>																																			
2.	<p>Date – (20/01/2021)</p> <p>It is noted that the emission factor of some of the power plants under excel sheet 'OM(1)', 'OM(2)' and 'OM(3)' is more than 1.0 tCO₂/MWh during one or more data vintage year. Please refer to following table that lists such power plants and their OM EF for respective year. The number in red text colour indicates the OM EF more than 1.0.</p> <table><thead><tr><th>Power plant Sr. No. in base data sheet</th><th>Power Plant name</th><th>Fuel</th><th>Commis sioning year</th><th>OM EF 2017 (tCO₂/M Wh)</th><th>OM EF 2018 (tCO₂/M Wh)</th><th>OM EF 2019 (tCO₂/M Wh)</th></tr></thead><tbody><tr><td>5</td><td>Natitingou</td><td>Gas/Diesel Oil</td><td>2005</td><td>1.0184</td><td>0.7108</td><td>0.6618</td></tr><tr><td>6</td><td>Maria-Glela 1</td><td>Natural Gas</td><td>2019</td><td>-</td><td>-</td><td>1.2405</td></tr><tr><td>25</td><td>KOMPIENGA THERMIQUE</td><td>Gas/Diesel Oil</td><td>1988</td><td>1.0219</td><td>1.2767</td><td>1.2580</td></tr><tr><td>53</td><td>Kpoone Thermal Power Plant KTRPP</td><td>Gas/Diesel Oil</td><td>2016</td><td>0.7926</td><td>3.9159</td><td>4.1802</td></tr></tbody></table>	Power plant Sr. No. in base data sheet	Power Plant name	Fuel	Commis sioning year	OM EF 2017 (tCO ₂ /M Wh)	OM EF 2018 (tCO ₂ /M Wh)	OM EF 2019 (tCO ₂ /M Wh)	5	Natitingou	Gas/Diesel Oil	2005	1.0184	0.7108	0.6618	6	Maria-Glela 1	Natural Gas	2019	-	-	1.2405	25	KOMPIENGA THERMIQUE	Gas/Diesel Oil	1988	1.0219	1.2767	1.2580	53	Kpoone Thermal Power Plant KTRPP	Gas/Diesel Oil	2016	0.7926	3.9159	4.1802	<p>Date – (28/01/2021)</p> <p>This section reports i) on corrections conducted and ii) plant specific justification / context of high EFs. In general, it is our understanding that the high EFs depends predominately on fuel; for coal and diesel plants it is common to report EFs above 1 tCO₂/MWh. For the US, EPA reports the weighted average EF for diesel at 0.97 and for coal at 1.00 tCO₂/MWh. In countries facing difficult political economic framework, sub-optimal maintenance and lack of investment in new plants may lead</p>	<p>Date – (DD/MM/YYYY)</p> <p>Assessment of DNA's response –</p>
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FINDINGS AND RESOLUTIONS

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To be used when requesting further input or providing the requested input in accordance with the "Procedure: Development, revision, clarification and update of standardized baselines" (CDM-EB63-A28-PROC).						
No.	Request for Input (To be filled by the secretariat, two selected members of the panel/working group or the panel/working group)	Response (To be filled by the DNA and proponent)				
		Assessment of the response (To be filled by the secretariat, two selected members of the panel/working group or the panel/working group)				
to higher specific emissions.						
		Nr. 5.: data was checked, no mistakes could be identified. The load factor is low in all three years (0.0% - 0.4%) and the plant is small in terms of installed capacity (12 MW) leading to a comparably high EF.				
		Nr. 6.: a mistake was found in the conversion of RFO from kl to t. The mistake was corrected.				
		Nr. 25.: old plant, only 0.52 MW and only load factor of 0.4%-0.7%. This results in higher specific fuel consumption and related EFs.				
		Nr. 53.: The data was crosschecked and replaced with data delivered by the regulator. The new data results in a value of above 1tCO2/MWh and for year 1 and below 1 for year 3. Please note that the power plant was mainly running of residual fuel oil in year 1 and on natural gas in year 3.				
		Nr. 58 data was crosschecked and conversion errors were identified and amended.				
		Nr. 63. Data was checked and found to be integrated and converted correctly. Please note, this refers to a mobile power ship which, during year 1 and 2 operates based solely on RFO and in year 3 on RFO and partially on				

Nr. 5: data was checked, no mistakes could be identified. The load factor is low in all three years (0.0% - 0.4%) and the plant is small in terms of installed capacity (12 MW) leading to a comparably high EF.

Nr. 6: a mistake was found in the conversion of RFO from KL to t. The mistake was corrected.

Nr. 25: old plant, only 0.52 MW and only load factor of 0.4%-0.7%. This results in higher specific fuel consumption and related EFs.

Nr. 53: The data was crosschecked and replaced with data delivered by the regulator. The new data results in a value of above 11CO2/MWh and for year 1 and below 1 for year 3. Please note that the power plant was mainly running of residual fuel oil in year 1 and on natural gas in year 3.

Nr. 58 data was crosschecked and conversion errors were identified and amended.

Nr. 63: Data was checked and found to be integrated and converted correctly. Please note, this refers to a mobile power ship which, during year 1 and 2 operates based solely on RFO and in year 3 on RFO and partially on

FINDINGS AND RESOLUTIONS

Reference number of the request for update:			ASU006 "Standardized Baseline: Grid Emission Factor for the West African Power Pool			
To be used when requesting further input or providing the requested input in accordance with the "Procedure: Development, revision, clarification and update of standardized baselines" (CDM-EB63-A28-PROC).						
No.	Request for Input <i>(To be filled by the secretariat, two selected members of the panel/working group or the panel/working group)</i>	Response <i>(To be filled by the DNA and proponent)</i>	Assessment of the response <i>(To be filled by the secretariat, two selected members of the panel/working group or the panel/working group)</i>			
221	OMOKU GT6	Natural Gas	2008	0.5125	4.6989	0.7537
247	CALABAR NIPP GT1	Natural Gas	2015	2.5536	0.6455	0.6325
248	Cap des Biches - C.III Vapeur	Residual Fuel Oil	1966	1.0751	1.0902	1.1081
249	Bel air - TAG 4	Gas/Diesel Oil	2011	1.1666	1.0699	1.0917
250	Cap des Biches - TAG 2	Gas/Diesel Oil	2000	1.1705	1.4511	1.4311
<p>The DNA is requested to review the OM EF calculations for these power plants and also BM EF and CM EF calculations for entire WAPP grid and provide any justification why EF of these power plants is more than 1.0.</p>						
		<p>natural gas (connected to gas pipeline in Oct 2017) resulting in a decrease of the EF in year 3.</p> <p>Nr. 65: Data was checked and found to be integrated and converted correctly. The plant operates exclusively on RFO which naturally results in a high EF. Moreover, plant was commissioned during 2017 (completed in Nov) and operated partially before the completion of commissioning. The emission factor slightly improves from year 1 to year 2 and 3 related to improvement of the plant's operational management.</p> <p>Nr 94. The plant operates based on residual fuel oil, resulting typically in high EFs. The plant is very old (commissioned in 1966) and is mainly operated as reserve. The load factor for 2017 was 13% with no production in 2018 and 2019.</p> <p>Nrs 99-102: Data was cross-checked and no mistake could be identified. The coal power-based EFs are deemed unlikely, and the diesel based EFs are deemed impossible; all four units hence were switched to the A2 calculation mode. They now produce reasonable results.</p> <p>Nrs 156-157: the data reported by the TCM exhibits an unusually high fuel consumption for</p>				

FINDINGS AND RESOLUTIONS

Reference number of the request for update:		ASU0006 "Standardized Baseline: Grid Emission Factor for the West African Power Pool	
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No.	Request for Input (To be filled by the secretariat, two selected members of the panel/working group or the panel/working group)	Response (To be filled by the DNA and proponent)	Assessment of the response (To be filled by the secretariat, two selected members of the panel/working group or the panel/working group)
		<p>2017. We have changed this year to the A2 calculation approach.</p> <p>Nrs 198-201 was checked. The submitted data exhibits a usually high fuel consumption for 2018. We have changed this year to the A2 calculation approach.</p> <p>Nrs 216-221: an omission was identified. The transmission company provided the data on plant level, however unit specific installed capacities and commissioning dates. The total consumption was erroneously not broken down to the individual units for the year 2017. This was corrected.</p> <p>Nr 247: the fuel consumption data for 2017 was leading to very high EFs. That plant was changed to A2 calculation approach for 2017.</p> <p>Nr. 248: the plant was commissioned in 1966 and has surpassed it is expected operational live. Moreover, the plant operates on residual fuel resulting in comparably high EFs.</p> <p>Nrs. 249 +250: the data and units were checked and is considered to be correct. Both plants were operated at very low load factors ranging from 1.5% to 10.3% (average 4.7%). Such intermittent operation of plants leads to a higher fuel consumption and higher EFs.</p>	

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3.	<p>Date – (20/01/2021)</p> <p>It is noted that the calculation of OM EF under excel sheet 'OM Calc' does not consider generation from all the power plants that are not LCMR plants. Refer cells D291, F291 and H291 in the sheet 'OM Calc', the annual electricity generation should consider the generation from all plants that are not LCMR plants in respective year, the DNA did not consider the generation from all the plants. It considered the plants only up to cell D155 instead up to cell D290. The correct application of the formulae needs the DNA to consider all the plants i.e. up to cell D290. The correct application of the formulae for OM calculation leads to change OM EF. This will also lead to a minor change in CM EF values.</p> <p>To address this issue the DNA, need to submit revised excel file together with revised 'WAPP GEF - Grid Emission Factor Report 2020-12-11.docx' and 'ASB0034 2020-12-12 Update 2020.docx'.</p>	<p>Date – (28/01/2021)</p> <p>The excel functions have been corrected.</p>	<p>Date – (DD/MM/YYYY)</p> <p>Assessment of DNA's response –</p>

Document information

Version	Date	Description
02.0	21 September 2018	Revision to: <ul style="list-style-type: none">• Reflect updated list of attachments contained in the version 05.2 of "Procedure: Development, revision, clarification and update of standardized baselines" (CDM-EB63-A28-PROC);• Include editorial and structural improvement.
01.0	18 November 2015	Initial publication.

Decision Class: Regulatory

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05 FEB 2021