



Assessment Report for CDM proposed standardized baseline (Version 02.0)

(To be used by the UNFCCC secretariat in assessing the quality of a proposed standardized baseline only when requested by eligible DNAs.)

Title of proposed standardized baseline:	Grid Emission Factor for the Republic of Sudan
Reference of proposed standardized baseline:	PSB0030
Name(s) of the Party or Parties to which the proposed standardized baseline applies:	Republic of Sudan
Name(s) of the proponent(s) of the proposed standardized baseline:	The Designated National Authority (DNA) of the Republic of Sudan
History of the submission & assessment:	<ol style="list-style-type: none"> 1) 03/03/2015: first submission was received 2) 29/07/2015: second submission was received 3) 06/08/2015: third submission was received <ul style="list-style-type: none"> • 06/08/2015: initial assessment was finalized and the proposed standardized baseline (PSB) was uploaded on the UNFCCC website. • 20/08/2015: findings were raised in accordance with the requirements of "Guidelines for quality assurance and quality control of data used in the establishment of standardized baselines" (version 2.0) (QA/QC guideline). 4) 19/10/2015: fourth submission was received <ul style="list-style-type: none"> • 28/01/2016: further inputs from the DNA were requested to fully address the issues related to the data quality. 5) 10/02/2016: fifth submission was received <ul style="list-style-type: none"> • 10/02/2016: additional submission was considered to be compliant with the approach used to develop the PSB ("Tool to calculate the emission factor for an electricity system" (version 04.0.0)). The submission was sufficient to prepare a final recommendation. • 11/02/2016: The draft standardized baseline (DSB) was sent to the DNA, which agreed to recommend the DSB to the Board for approval.

<p>Conclusion:</p> <p>(a) The quality assurance and quality control system complied with the provisions and data quality objectives of the valid “Guidelines for quality assurance and quality control of data in the establishment of standardized baselines”</p> <p>(b) The approach used by this proposed standardized baseline complied with one of the approaches referred to in the valid “Procedure for development, revision, clarification and update of standardized baselines”:</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> N/A</p> <p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>One of the four approved approaches:</p> <p><input type="checkbox"/> The “Guidelines for the establishment of sector specific standardized baselines”;</p> <p><input type="checkbox"/> A methodological approach contained in an approved baseline and monitoring methodology;</p> <p><input checked="" type="checkbox"/> A methodological approach contained in an approved methodological tool “Tool to calculate the emission factor for an electricity system” (version 04.0.0);</p> <p><input type="checkbox"/> The “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM”.</p>
<p>Date when the assessment report is completed:</p>	<p>05/02/2016</p>

SECTION A. Summary of Proposed Standardized Baseline

A.1. Scope and application of the proposed standardized baseline

1. The proposed standardized baseline (PSB) is developed for
 - (a) Additionality demonstration;
 - (b) Baseline identification;
 - (c) Baseline emission estimation
2. This PSB applies to the energy industries sector, which includes electricity generation/ consumption in the Republic of Sudan.
3. Projects shall use the standardized baseline together with the approved methodologies where the “Tool to calculate the emission factor for an electricity system” (version 04.0.0) (hereinafter referred to as “the tool”) is referenced.

A.2. Description of the proposed standardized baseline

4. Key data parameters and data sources:

Key data parameters	Data sources
Fuel properties (NCV, emission factor)	For NCV: Sudanese Thermal Power Generating Company Ltd (STPG), Annex 7 For EF (lower limit of 95% C.I.): IPCC 2006 Guidelines, Vol. 2, Table 1.4
Fuel consumption	National Load Dispatch Centre
Electricity generation in the national grid	National Load Dispatch Centre
Electricity imports/exports	National Load Dispatch Centre

5. The scope and coverage of the data:

(a) The PSB identifies, as part of the relevant electricity system:

- (i) 5 hydropower plants
- (ii) 10 thermal power plants
- (iii) imports from Ethiopia;

(b) The data include key information of each facility (name, technology, electricity generation, fuel type/consumption and commissioning data)

(c) The data represent all regions in the country

(d) The data represent three years (2010, 2011 and 2012).

6. The DNA uses a data template in accordance with the approved tool.

7. The development of the PSB includes only grid-connected power plants.

8. As the total low-cost/must-run (LCMR) average from 2010 to 2014 is 66.28% (i.e. above 50%), average OM method is applied.

9. Data vintage of 2010-2012 is used for OM calculation and the data for 2012 is used for BM calculation.

SECTION B. Summary of Assessment

B.1. Assessment process

10. The purpose of assessment conducted by the secretariat is: i) to ensure that the QA/QC system implemented by the DNA complies with the provisions and data quality objectives of the “Guidelines for quality assurance and quality control of data used in the establishment of standardized baselines” (hereinafter referred to as QA/QC guidelines); and ii) to ensure that the PSB complies with the requirements of the tool.

11. The assessment consisted of the following:

(a) Review of the documents submitted;

- (b) Identification of issues (assessment findings) and draft of the assessment “findings and resolution” note;
- (c) Communication of assessment findings with DNA and request for their resolution and response;
- (d) Direct communication with DNA;
- (e) Review of the additional documents and/or responses provided by DNA;
- (f) Closing the findings;
- (g) Conclusion of the assessment report.

12. A desk review was performed on the following data/information submitted as part of the PSB:

- (a) First submission dated 03/03/2015, second submission dated 29/07/2015, and third submission dated 06/08/2015 included:
 - (i) The Republic of Sudan grid emission factor standardized baseline report;
 - (ii) Proposed standardized baseline form (F-CDM-PSB v1.0);
 - (iii) Calculation sheet;
- (b) Assessment findings were communicated to the DNA on 20/08/2015, in response to which the DNA submitted the revised calculation and additional relevant documents;
- (c) Fourth submission dated 19/10/2015 in responding to the secretariat’s finding, included, inter alia:
 - (i) Updated the Republic of Sudan grid emission factor standardized baseline report;
 - (ii) PSB finding and resolutions;
 - (iii) Revised calculation sheet;
- (d) Fifth submission dated 10/02/2016, addressing the secretariat’s finding included:
 - (i) Updated the Republic of Sudan grid emission factor standardized baseline report;
 - (ii) Revised calculation sheet;
- (e) The additional submissions were sufficient to prepare a final recommendation.

B.2. Assessment opinion:

13. In accordance with the QA/QC guidelines, the secretariat concluded that the all the following requirements were met by this PSB:

- (a) QC system (resource/procedure) was implemented to check the data quality before/during/or after data collection. All primary data come directly from National Load Dispatch Centre (LDC). The information regarding plants performance (electricity generation, fuel consumption) is monitored continuously by LDC. The data will be archived and maintained in such a way that allow for the reproduction of the calculation of the emission factor of the grid;

- (b) QC activities were clearly documented in the QC report. Data templates were presented to the power sector through which the required data for the GEF calculation and renewal may be maintained and submitted to DNA to facilitate further transparency and quality control;
 - (c) All relevant documents and data were available for assessment. The data used in the calculation are available at LDC office;
 - (d) The data key sources were LDC and Sudanese Company of Transmission Lines Ltd. (SETCO), a subsidiary of the Ministry of Water Resources and Electricity (WRE);
 - (e) The data scope was comprehensive enough to produce a “true and fair” representative standardized baseline in the particular sector;
 - (f) The key data and information are consistently presented;
 - (g) The data vintage (three years) was met as per the provisions of the “Tool to calculate the emission factor for an electricity system” (version 04.0.0);
 - (h) The assumptions and conservative approaches for data processing and calculations were justified;
 - (i) There were no confidential data but the data file would be presented in an anonymous form.
14. The details of issues (assessment findings) identified by the secretariat and the responses provided by the DNA are provided in Appendix 1 to this document.
15. The secretariat concluded that the PSB complied with the approach of the tool.

Appendix 1. Findings and resolutions

CL No.	Clarification (CL)	Reference to general provisions of guidelines on quality assurance and quality control of data used for sector-specific standardized baselines	Responses and corrective actions of DNA	Conclusion
1	<p><u>Calculation of the Build Margin emission factor.</u></p> <p>In the calculation of the build margin emission factor, the proposed standardized baseline allocated the energy generation of each unit of a power plant proportionally to the total energy generated in the power plant.</p> <p>This approach is not provided in the tool. The DNA is requested to provide explanation and justification for the rationale on why this approach was used.</p> <p>If this is a deviation from the Tool, the DNA should describe the deviation in the CDM-PSB-FORM (page 9).</p>	As per section 6.5 of “Tool to calculate the emission factor for an electricity system” (version 4.0)	Table 6 in the spread sheet is revised to apportion the total MWh generation fed to a grid among the units based on actual net generation data by each unit. Only for Garri 4 and Merowe units, the energy generation values are derived on prorata basis i.e., based on the total electricity output apportioned using the installed capacity values as these units are commissioned in the same year and therefore are representing as a single plant. Revised spread sheet now contains unit wise 2012 BM data in a separate tab.	Closed
2	<p><u>Data vintage and Currentness</u></p> <p>The Tool specifies that a 3 - year generation - weighted average shall be used based on the most recent data available at the time of submission. The proposed standardized baseline was submitted in March 2015. Therefore the DNA should explain why the most recent data of 2013 and 2014 was not used to develop the proposed</p>	As per paragraph 36 of the “Tool to calculate the emission factor for an electricity system” (version 4.0) & As per paragraph 15 (e) of the “Guideline on quality assurance and quality control of data used in the establishment of	The development of the proposed standardized baseline started in the fourth quarter of 2014. The data of 2013 and 2014 were not available in complete form to incorporate them in the submission in March 2015.	Closed

CL No.	Clarification (CL)	Reference to general provisions of guidelines on quality assurance and quality control of data used for sector-specific standardized baselines	Responses and corrective actions of DNA	Conclusion
	standardized baseline.	standardized baselines”,(version 2.0)		
3	<p><u>Consultation report</u></p> <p>The submission includes the attendance list for the Sudan GEF SB calculation meeting held in 2014. However, the consultation process should be further elaborated. That is, the DNA should specify when, where and why the consultation meeting(s) was held as well as the outcomes of the meeting(s) e.g. summary of the comments received and how the comments were taken in account. The DNA may wish to submit a consultation report.</p>	<p>Transparency:</p> <p>As per paragraph 15 (j) of the “Guideline on quality assurance and quality control of data used in the establishment of standardized baselines”, (version 2.0)</p>	<p>Please find attached the public consultation report, as specified in paragraph 15 (j) of the “Guideline: Quality assurance and quality control of data used in the establishment of standardized baselines” (version 02.0), prepared to further elaborate the consultation process during the preparation of standardized baseline for electricity sector in Sudan.</p>	Closed
4	<p><u>Target population</u></p> <p>The submission includes the relevant activity data and information to derive the emission factor for the power sector in Sudan. However it is not clear that all the grid-connected power plants are included. The DNA is requested to provide further information whether the data covered in the submission belong to 100% coverage of the power plants connected to the Sudan national grid.</p>	<p>Completeness:</p> <p>As per paragraph 15 (b) of the “Guideline on quality assurance and quality control of data used in the establishment of standardized baselines”, (version 2.0)</p>	<p>DNA confirms that the data covered in the submission (annual reports of 2010, 2011 and 2012) belong to 100% coverage of the power plants connected to the Sudanese national grid. This information is also included in the revised PSB submission form. Please find attached the official confirmation letter from the National Load Dispatch Centre (LDC).</p>	Closed

- - -

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
01.0	27 May 2013	Initial publication
02.0	01 June 2015	Modified in order to take into account the Board's decision and improve clarity and consistency

Decision Class: Regulatory
Document Type: Form, (for Secretariat use only)
Business Function: Methodology
Keywords: Assessment, Standardized baselines, Methodologies
