



Proposed standardized baseline submission form (Version 02.0)

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

INFORMATION TO BE COMPLETED BY THE DNA

Title of the proposed standardized baseline:	Rwanda Grid Emission Factor
Name(s) of the Party or Parties to which the proposed standardized baseline applies:	Rwanda
DNA submitting this form:	Rwanda
Is this one of the first three submissions for a Party with 10 or fewer than 10 registered CDM project activities as of 31 December 2010? <i>(For such a Party, the submission of an assessment report may be omitted. Not required to check Yes or No if the submission is for a group of Parties.)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Attachments:	
<input checked="" type="checkbox"/> Additional documentation supporting the submission (e.g. relevant data, documentation, statistics, studies, calculation tables, etc.), where applicable <input checked="" type="checkbox"/> Data used to establish the proposed standardized baseline <input type="checkbox"/> An assessment report on the quality of the data collection, processing and compilation prepared by a designated operational entity (DOE) <p>In accordance with the procedure "Development, revision, clarification and update of standardized baselines", v 03.0, as Rwanda is a Party with 10 or fewer registered CDM project activities as of 31 December 2010 and this is the first submission of a SB, the DOE assessment report was omitted.</p> <input checked="" type="checkbox"/> Letters of approval of all the DNAs of the Parties to which the proposed standardized baseline applies, where the standardized baseline applies to a group of Parties	
Name of authorized officer signing for the DNA:	Dr. ROSE MUKANKOMEJE
Date (DD/MM/YYYY) and signature for the DNA:	21/05/2014
Contact information of the focal point(s) of the DNA: <i>(Names, email-addresses and phone contacts for procedural and technical communication on the submission)</i>	Ms UWIMANA IMMACULEE RwandaDNA@gmail.com +250788871527
Name(s) of the proponent(s) of the proposed standardized baseline:	Rwanda DNA
Affiliation of the proponent(s): <i>(The definition of "admitted observer organization" can be found at http://unfccc.int/resource/ngo/art7_6.pdf)</i>	<input checked="" type="checkbox"/> Party <input type="checkbox"/> Project Participant (PP) <input type="checkbox"/> International Industry Organization <input type="checkbox"/> Admitted Observer Organization



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Contact information of the focal point(s) of the proponent (s):

(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 standardized baseline.)



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**Proposed standardized baseline submission form
CDM-PSB-FORM (Version 02.0)**

Title: Grid Emission Factor for Rwanda

Submission date: xx

Version number: 1.0

Approach

The Standardized Baseline (SB) was developed using the methodological tool Methodological Tool “Tool to Calculate the Emission Factor for an Electricity System” Version 4.0.

Elements to be standardized

Please check below all the elements to be standardized by the proposed standardized baseline.

- ☐ Additionality demonstration
- ☐ Baseline identification
- ☒ Baseline emission/removal estimation
- ☐ Land eligibility demonstration (applicable only to afforestation and reforestation project activities).

Further inputs requested to the DNA (To be completed by the secretariat)

1. The approach used by the DNA to calculate emission factor of the grid i.e. selection of option IIb under Step 2 is valid only for renewable energy projects for their first crediting period. Thus the DNA is requested to reconfirm the applicability of the PSB in the CDM-PSB-FORM. In case the PSB is intended to be applicable to any CDM project activity where the grid emission factor determination is required, it is requested to provide the values of combined margin emission factor (EF) with and without including off-grid power units separately.

DNA: The applicability of the emission factor has been updated to reflect that it is only valid for the first crediting period.

The SB and all relevant documents have been updated to include calculations with and without off-grid power units.

Secretariat: Closed. The revised PSB form (Meth_form13_CDM-PSB 18_06_15.doc), grid emission factor calculation document (Rwanda_GEF_SB_18_06_15.pdf) and excel sheet (Rwanda_GEF_2013_18_06_15.xls) provides emission factor as per option I and option IIb of step 2.

2. The “Tool to Calculate the Emission Factor for an Electricity System” requires determining project electricity system and connected electricity systems if any, i.e. para 14-16 of the tool. The document ‘Rwanda Grid Emission Factor Standardized Baseline’ mentions that Rwanda



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imports and exports electricity from the neighboring countries such as Uganda and DRC, however it doesn't clarify whether the Rwanda grid is primary grid or a part of a larger regional grid. The DNA is therefore requested to update the document by providing detailed information on connected electricity systems, transmission capacity of transmission lines, etc.

DNA: *The following wording has been added to the SB document: “EWSA and the Designated National Authority (DNA) have confirmed that Rwanda is not part of a larger regional grid. This is further backed up by the African Development Bank Rwanda Energy Sector Review and Action Plan(2013) which further confirms that, apart from using its share of regional hydropower plants, Rwanda is not connected to any regional transmission network..”*

Secretariat: Closed. It is agreed that the electricity from Ruzizi I and Ruzizi II should be considered as import since it is coming from a power plant which is located outside Rwandan geographical boundary irrespective of its ownership. This would be consistent with the definition of the electricity import as provided in the tool, however may not represent on-ground scenario. The DNA has accordingly revised PSB form (Meth_form13_CDM-PSB 18_06_15.doc), grid emission factor calculation document (Rwanda_GEF_SB_18_06_15.pdf) and excel sheet (Rwanda_GEF_2013_18_06_15.xls).

3. The submission ‘Rwanda Grid Emission Factor Standardized Baseline’ considers the sample group of the power units used to determine the build margin emission factor which includes power plants with the same year of commissioning. Thus it is not clear how the DNA has identified:
- The set of five power units, excluding power units registered as CDM project activities that started to supply electricity to the grid most recently (SET_{5units}) and
 - The set of power units, excluding power units registered as CDM project activities, that started to supply electricity to the grid most recently and that comprise 20 per cent of annual electricity generation (if 20 per cent falls on part of the generation of a unit, the generation of that unit is fully included in the calculation) ($SET_{\geq 20 \text{ per cent}}$)

It is therefore requested to provide the exact date of commissioning and to revise the cohort of power plants if necessary.

DNA: *The months/years of commissioning have been added to the SB document. As Cymbili's commissioning was partway through Sept 2011 while Nkora's was fully operational for all of Sept, the set of the 5 newest plants has been adjusted to replace Cymbili with Nkora. Please note that Gisenyi and Ghira were under rehab for parts of 2009-2011 but were commissioned, respectively, in 1957 and 1984. The BM was revised based on the dates of commissioning taken from the generation information seen in the EWSA generation spreadsheet. Commissioning dates have been added to the SB document.*

Secretariat: Closed. The explanation provided by the DNA is acceptable. All related documents such as PSB form (Meth_form13_CDM-PSB 18_06_15.doc), grid emission factor calculation document (Rwanda_GEF_SB_18_06_15.pdf) and excel sheet (Rwanda_GEF_2013_18_06_15.xls) were revised accordingly.

4. The build margin emission factor value provided on page 11 and the combined margin emission factor value provided on page 12 of the document ‘Rwanda Grid Emission Factor Standardized Baseline’ is not matching with the respective values mentioned in revised excel



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sheet 'Rwanda_GEF_2013_20_10_14.xls'. It is requested to revise the submission to address the inconsistency.

DNA:*All documents have been updated.*

Secretariat:Closed. The inconsistency was addressed in the revised grid emission factor calculation document (Rwanda_GEF_SB_18_06_15.pdf) and excel sheet (Rwanda_GEF_2013_18_06_15.xls).

5. The 'Rwanda Grid Emission Factor Standardized Baseline' on page 7 mentions Rusizi I, Rusizi II and Kabale as export points and Cyanika-Gisoro, Gisenyi-Goma and Mururu II as import points while the excel sheet 'Rwanda_GEF_2013_20_10_14.xls' mentions Rusizi I, Rusizi II and Kabale as import points and Cyanika-Gisoro, Gisenyi-Goma and Mururu II as export points. It is requested to revise the submission to remove this inconsistency.

DNA:*All documents are now aligned. The EF of the imported electricity has been updated to account for the use of the OM of the DRC grid, as seen in ASB0001.*

Secretariat:Closed. The inconsistency was addressed in the revised PSB form (Meth_form13_CDM-PSB 18_06_15.doc), grid emission factor calculation document (Rwanda_GEF_SB_18_06_15.pdf) and excel sheet (Rwanda_GEF_2013_18_06_15.xls).

6. It is requested to mention correct fuel types for all the power plants mentioned under Annex 1 '2009-2013 Generation data' of document 'Rwanda Grid Emission Factor Standardized Baseline' and excel sheet 'Rwanda_GEF_2013_20_10_14.xls'.

DNA:*All documents have been updated.*

Secretariat:Closed. Fuel type is mentioned for all the power plants in the revised PSB form (Meth_form13_CDM-PSB 18_06_15.doc), grid emission factor calculation document (Rwanda_GEF_SB_18_06_15.pdf) and excel sheet (Rwanda_GEF_2013_18_06_15.xls).



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**SECTION A: PROPOSED STANDARDIZED BASELINE DEVELOPED USING THE
“GUIDELINES FOR THE ESTABLISHMENT OF SECTOR SPECIFIC STANDARDIZED
BASELINES”**

*Please complete this section only when the proposed standardized baseline is developed using the
“Guidelines for the establishment of sector specific standardized baselines”.*

Not applicable

Applicability of the proposed standardized baseline

Please provide the following information:

- *The host country(ies) or region(s) within a host country to which the proposed standardized baseline is applicable. In case of disaggregation by region(s) within a host country, please document transparently the geographical boundaries of the region (e.g. provinces, electric grids, etc).*
- *Other factors for disaggregation (e.g. output capacity, age of facilities) relating to the applicability of the proposed standardized baseline.*
- *The sector(s) to which the proposed standardized baselines is applied. Note that a sector refers to a segment of a national economy that delivers defined output(s) (e.g. clinker production, domestic / household energy supply). The sector is characterized by the output(s) O_i it generates.*
- *The output to which the proposed standardized baseline is applied, i.e. the goods or services with comparable quality, properties, and application areas (e.g. clinker, lighting, residential cooking).*
- *The measure(s) to which the proposed standardized baseline is applicable is/are:*
 - ☐ Fuel and feedstock switch;
 - ☐ Switch of technology with or without change of energy source (including energy efficiency improvement);
 - ☐ Methane destruction;
 - ☐ Methane formation avoidance.

Additionality demonstration

Please explain how the “Guidelines for the establishment of sector specific standardized baselines” were applied to demonstrate additionality and develop a positive list of project activities or programme of activities that are deemed additional. Follow the steps and guidance of the “Guidelines for the establishment of sector specific standardized baselines”. Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.



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Baseline identification

Please explain how the “Guidelines for the establishment of sector specific standardized baselines” were applied to identify the baseline for the measures. Follow the steps and guidance of the “Guidelines for the establishment of sector specific standardized baselines”. Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.

Baseline emission factor estimation

Please explain how the “Guidelines for the establishment of sector specific standardized baselines” were applied to determine a baseline emission factor. Follow the steps and guidance of the “Guidelines for the establishment of sector specific standardized baselines”. Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.

Use of the proposed standardized baseline with an approved methodology

Please explain how the proposed standardized baseline will be used with the latest version(s) of a relevant approved methodology(ies) i.e. how the approved methodology(ies) will be used in conjunction with the proposed standardized baseline. Please take into account and/or describe the following:

- *A standardized baseline derived from the “Guidelines for the establishment of sector specific standardized baselines” will include demonstration of additionality, identification of the baseline scenario and the determination of baseline emissions;*
- *Which parts of the relevant methodology(ies) (such as applicability, project boundary, project emissions, leakage emissions and monitoring) will be used with the standardized baseline; and*
- *Additional provisions on applicability, project boundary, project emissions, leakage emissions and monitoring to be included in the standardized baseline.*

If an approved methodology to be used with the proposed standardized baseline is not available, a new or revised methodology shall be proposed in accordance with the “Procedure: development, revision and clarification of baseline and monitoring methodologies and methodological tools”. In this case, please indicate the title of the proposed new methodology or proposed revised methodology.

Validity of the proposed standardized baseline

Please state the period of time for which the proposed standardized baseline is valid. Please note that Appendix I of the “Guidelines for the establishment of sector specific standardized baselines” provide interim values for data vintage and the frequency of update.

Deviations from the guidelines (if applicable)

Please provide descriptions of and justifications for any deviations from the “Guidelines for the establishment of sector specific standardized baselines” to develop the proposed standardized baseline.

References and any other information



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SECTION B: PROPOSED STANDARDIZED BASELINE DEVELOPED USING A METHODOLOGICAL APPROACH CONTAINED IN AN APPROVED METHODOLOGY

Please complete this section only when the proposed standardized baseline is developed using a methodological approach contained in the latest version of an approved methodology.

Not applicable

Applicability of the proposed standardized baseline

Please state the host country(ies) or region(s) within a host country to which the proposed standardized baseline is applicable. In case of region(s) within a host country, please document transparently the geographical boundaries of the region (e.g. provinces, electric grids, etc).

Additionality demonstration(if applicable)

Please explain how a standardized procedure is developed for additionality demonstration according to the methodological approach contained in the latest version of the approved methodology. Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.

Baseline identification(if applicable)

Please explain how the methodological approach contained in the latest version of the approved methodology was applied to identify the baseline. Follow the steps and guidance of the approved methodology. Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.

Baseline emission estimation(if applicable)

Please explain how the methodological approach contained in the latest version of the approved methodology was applied to estimate the baseline emissions of a project activity or programme of activities in (a) country(ies) or region. Follow the steps and guidance of the approved methodologies. Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner. Note that the underlying methodology has to provide a methodological approach to derive the baseline emissions for a country or region in order to apply this step.

Use of the proposed standardized baseline with the approved methodology

Please explain how the proposed standardized baseline will be used with the latest version of the relevant approved methodology(ies), i.e. which (parts of) the approved methodology(ies) are replaced by the proposed standardized baseline.



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Validity of the proposed standardized baseline

Please state the period of time for which the proposed standardized baseline is valid in accordance with, if any, the relevant requirements contained in the latest version of the approved methodology. If the approved methodology does not contain the relevant requirements, please note that Appendix I of the “Guidelines for the establishment of sector specific standardized baselines” provide interim values for data vintage and the frequency of update.

Deviations from the approved methodology (if applicable)

Please provide descriptions of and justifications for any deviations from the latest version of the approved methodology to develop the proposed standardized baseline.

References and any other information



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SECTION C: PROPOSED STANDARDIZED BASELINE DEVELOPED USING A METHODOLOGICAL APPROACH CONTAINED IN AN APPROVED TOOL

Please complete this section only when the proposed standardized baseline is developed using a methodological approach contained in the latest version of an approved tool. An example for this is the application of the “Tool to calculate the emission factor for an electricity system” to estimate the emission factor for an electric grid.

Applicability of the proposed standardized baseline

Please state the host country(ies) or region(s) within a host country to which the proposed standardized baseline is applicable. In case of region(s) within a host country, please document transparently the geographical boundaries of the region (e.g. provinces, electric grids, etc).

Rwanda¹

Baseline emission factor estimation

Please explain how the methodological approach contained in the approved tool was applied to estimate the baseline emission factor. Follow the steps and guidance of the approved tool. Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner. Note that the underlying tool has to provide a methodological approach to derive the baseline emission factor for a country or region in order to apply this step. This applies, for example, to the methodological tool “Tool to determine the emission factor of an electricity system”.

The “Tool to Calculate the Emission Factor for an Electricity System” Version 4.0 was followed step by step. The details can be seen in the attached report.

Data from the Rwanda Energy, Water and Sanitation Authority (EWSA) was provided in March 2014. Please refer to the attached report for further information about data, data sources, assumptions, calculation steps and outcomes.

Validity of the proposed standardized baseline

Please state the period of time for which the proposed standardized baseline is valid in accordance with, if any, the relevant requirements contained in the approved tool(s). If the approved tool(s) does(do) not contain the relevant requirements, please note that Appendix I of the “Guidelines for the establishment of sector specific standardized baselines” provide interim values for data vintage and the frequency of update.

The SB may be used for any methodology and/or tool which refers to the “Tool to Calculate the Emission Factor for an Electricity System”. The SB is applicable for the first crediting period. For the second

¹ The Rwanda national grid is a stand-alone electricity grid. A single line diagram for the country’s grid is included in the attached documentation. Methodology Panel members in May 2015 confirmed that Rwanda’s grid is not a regional grid: “to consider electricity from Ruzizi I and Ruzizi II as import to Rwandan grid as it is coming from a power plant connected to electricity systems which is located outside Rwandan geographical boundary irrespective of its ownership.”



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crediting period, in accordance with the Tool, the default CO₂ emission factor and the default value of the electricity generated by the off-grid power plants can no longer be applied. In the second crediting period, Option I or Option IIa of Step 2 of the Tool must be applied for the calculation of the emission factor for the Rwandan electricity system.

Deviations from the approved tool (if applicable)

Please provide descriptions of and justifications for any deviations from the approved tool to develop the proposed standardized baseline.

Not applicable

References and any other information

Information about references is included in the attached report.



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**SECTION D: PROPOSED STANDARDIZED BASELINE DEVELOPED USING THE
“GUIDELINE: ESTABLISHMENT OF STANDARDIZED BASELINES FOR
AFFORESTATION AND REFORESTATION PROJECT ACTIVITIES UNDER THE CDM”**

Please complete this section only when the proposed standardized baseline is developed using the guideline “Establishment of standardized baselines for afforestation and reforestation project activities under the CDM”.

Not applicable

Applicability of the proposed standardized baseline

Please provide the following information:

- *The host country(ies) or region(s) within a host country to which the proposed standardized baseline is applicable. In case of region(s) within a host country, please document transparently the geographical boundaries of the region (e.g. administrative units, geo-referenced coordinates).*

Additionality demonstration

Please explain how the “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM” was applied to demonstrate additionality of A/R CDM project activities undertaken in the areas of land included under the scope of the proposed standardized baseline. Please document all relevant data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.

Baseline identification

Please explain how the “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM” was applied to determine the baseline of A/R CDM project activities undertaken in the areas of land included under the scope of the proposed standardized baseline. Please document all relevant data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.

Baseline removals estimation (if applicable)

Please explain how the “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM” was applied to estimate the net GHG removals in the baseline of A/R CDM project activities undertaken in the areas of land included under the scope of the proposed standardized baseline. Please document all relevant data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.



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Land eligibility demonstration (if applicable)

Please explain whether eligibility of the lands included under the scope of the proposed standardized baseline for CDM is confirmed by the proposed standardized baseline.

If not, please explain whether well-defined approaches for demonstrating eligibility of lands for the CDM have been provided which will help the project participants in demonstrating eligibility of the lands under their projects.

In either case, please document all relevant data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.

Validity of the proposed standardized baseline

Please state the period of time for which the proposed standardized baseline is valid.

Deviations from the guideline (if applicable)

Please provide descriptions of and justifications for any deviations from the “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM” to develop the proposed standardized baseline.

References and any other information

PROPOSED STANDARDIZED BASELINE SUBMISSION FORM
(CDM-PSB-FORM) - Version 02.0



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Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
02.0	1 December 2013	<p>The document title has changed from “Proposed standardized baseline form” (F-CDM-PSB) to “Proposed standardized baseline submission form” (CDM-PSB-FORM).</p> <p>Revision to:</p> <ul style="list-style-type: none">• Reflect updated requirements in the “Procedure: Development, revision, clarification and update of standardized baselines”• Include editorial improvement
01.0	23 March 2012	Initial publication.
<p>Decision Class: Regulatory Document Type: Form Business Function: Methodology Keywords: standardized baselines</p>		