



Proposed standardized baseline submission form (Version 03.0)

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:	Grid emission factor for Antigua and Barbuda
Name(s) of the Party or Parties to which the proposed standardized baseline applies:	Antigua and Barbuda
DNA submitting this form:	Environment Division Ministry of Agriculture, Lands, Marine Affairs, Housing and the Environment Antigua and Barbuda
Is the proposed standardized baseline submitted by a single Party or group of Parties? <i>(If the Party had 10 or fewer registered CDM project activities as of 31 December 2010, or each Party of the group of Parties had 10 or fewer registered CDM project activities as of 31 December 2010, has the Party or each Party of the group of Parties used the option to omit the assessment report more than twice in past submissions of a proposed standardized baseline?)</i>	<input checked="" type="checkbox"/> Single Party <input type="checkbox"/> Group of Parties
Attachments:	
<input type="checkbox"/> Additional documentation supporting the submission (e.g. relevant data, statistics, studies, calculation tables, quality control report, etc.), where applicable <input checked="" type="checkbox"/> Data used to establish the proposed standardized baseline in a sector-specific data template <input type="checkbox"/> An assessment report prepared by a designated operational entity (DOE) <input 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:	H.E. Ms. Diann Black-Layne
Date (DD/MM/YYYY) and signature for the DNA:	20 / 11 / 2015
Contact information of the focal point(s) of the DNA: <i>(Names, e-mail addresses and phone contacts for procedural and technical communication on the submission)</i>	H.E. Ms. Diann Black-Layne dcblack11@yahoo.com , dcblack11@gmail.com +1 268 462 1052 +1 268 562 3860

Name(s) of the proponent(s) of the proposed standardized baseline:	Antigua and Barbuda DNA
Affiliation of the proponent(s): <i>(The definition of "admitted observer organization" can be found at https://cdm.unfccc.int/Reference/Guidclarif/glos_CDM.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
Contact information of the focal point(s) of the proponent(s): <i>(Names, e-mail addresses and phone contacts for procedural and technical communication on the submission. This section does not need to be completed if the DNA(s) is(are) the proponent(s) of the proposed standardized baseline.)</i>	
INFORMATION TO BE COMPLETED BY THE SECRETARIAT AND THE PROPONENT(S)	
Further inputs requested from the proponent(s) on the proposed standardized baseline: <i>(List of additional information and/or modifications that are required to prepare a draft standardized baseline, if applicable.)</i>	
Response from the proponent(s): <i>(If there are changes in the proposed standardized baseline form as a result of changes carried out, submit the changes in the highlighted text).</i>	

**Proposed standardized baseline submission form
CDM-PSB-FORM (Version 03.0)**

Title: Grid emission factor for Antigua and Barbuda

Submission date (dd/mm/yyyy): 20 / 11 / 2015

Version number: 01

Approaches

Check below all the approaches used to develop the proposed standardized baseline and state the version and/or the reference (number, title, version) if applicable.

- ☒ The approach contained in the "Guidelines for the establishment of sector specific standardized baselines" (Version: **02.0**)
- ☐ A methodological approach contained in an approved, proposed new or revised baseline and monitoring methodology (reference: _____)
- ☐ A methodological approach contained in an approved, proposed new or revised methodological tool (reference : _____)
- ☐ The approach contained in the "Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM" (version: _____)

Combination of the approaches (if applicable)

Provide a justification for the necessity and the appropriateness of the combination if more than one approach was used for the development of the proposed standardized baseline.

Not applicable

New or revised methodology or methodological tool (if applicable)

This section is applicable to the following situations:

- 1. If there is no approved methodology or methodological tool available that can be used for the development of the proposed standardized baseline, and if the proponent wishes develop a new methodological approach by submitting a new methodology or methodological tool or revise the approach contained in an approved methodology or methodological tool, and/or*
- 2. If there is no approved methodology available to be used together with the proposed standardized baseline for the estimation of emission reductions, and the proponents wishes to develop new methodology or revise the existing approved methodology.*

Check below how the new or revised methodology or methodological tool is/was submitted for approval by the CDM Executive Board and for what purpose in accordance with the "Procedure: development, revision and clarification of baseline and monitoring methodologies and methodological tools". In this case, indicate below the title of the new or revised methodology or methodological tool if applicable:

- *New or revised methodology or methodological tool¹:*

- ☐ New methodology (title: _____)
- ☐ Revised methodology (title: _____)
- ☐ New methodological tool (title: _____)
- ☐ Revised methodological tool (title: _____)

- *Purpose:*

- ☐ For using the methodological approach in new/revised methodology/methodological tool for development of the proposed standardized baseline
- ☐ For using the new/revised methodology together with the proposed standardized baseline to estimate emission reductions

- *Process:*

- ☐ Methodology(ies)/methodological tool is/was proposed through the bottom-up process
- ☐ Request the secretariat to seek a mandate from the CDM Executive Board for its top-down development (if this option is selected, provide justification below)

(Justification: _____)

Elements to be standardized

Check below all the elements to be standardized by the proposed standardized baseline:

- ☐ Additionality
- ☐ Baseline/baseline land-use scenario
- ☒ Baseline emission/removal parameter
- ☐ Land eligibility (applicable only to afforestation and reforestation project activities)

¹ The proposed new or revised methodology or methodological tool for the purpose of developing a proposed standardized baseline, or the proposed new or revised methodology or methodological tool that will be used together with the proposed standardized baseline, may be submitted to the secretariat at the same time with the proposed standardized baseline in accordance with the "Procedure: development, revision and clarification of baseline and monitoring methodologies and methodological tools".

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

Complete this section only when the proposed standardized baseline is developed using the approach contained in the “Guidelines for the establishment of sector specific standardized baselines”.

Applicability of the proposed standardized baseline

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, 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, if applicable.*
- *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 standardization

Explain how the “Guidelines for the establishment of sector specific standardized baselines” were applied to standardize the additionality criterion of project activities or programmes of activities that are deemed additional. Document all underlying data, data sources, assumptions, steps and outcomes in a clear and transparent manner.

Not applicable

Baseline identification

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

Not applicable

Baseline parameter standardization

Explain how the “Guidelines for the establishment of sector specific standardized baselines” were applied to standardize a baseline parameter (e.g. baseline specific energy consumption, baseline fuel emission factor, baseline emission factor). Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.

Provisions contained in paragraphs 26 to 28 of the version 02 of the Guidelines for the establishment of sector specific standardized baselines (hereinafter referred to as “the SB Guidelines”) were applied.

The following table shows data from Antigua Public Utilities Authority (APUA). The data belongs to annual average power generation (GWh/year) representing 2012-2013 for 4 power plants. The list of power plants is arranged in descending order of carbon intensity per unit of power produced (tCO₂/GWh).

Plant's Name	Type of Fuel	EF CO ₂	NCV	Average Power Generation	Emissions per GWh
		tCO ₂ /TJ	TJ/Gg	GWh/year	tCO ₂ /GWh
Wadadli Power Plant	Diesel	72.60	41.40	68.42	781
Antigua Power Company (Black Pine)	Diesel	72.60	41.40	150.77	602
Antigua Power Company (APC Plant)	Diesel	72.60	41.40	105.33	609
Barbuda power plant	Diesel	72.60	41.40	2.97	920
Total				327.5	

Source: Antigua Public Utilities Authority (APUA)

The normalized cumulative output, produced based on technologies is plotted in descending order of carbon intensity of the technologies.

Power units ranked by emission factor				
Name of Power Unit	Electricity generation, based on three years data (MWh)	Emission factor of facility, based on three years data (tCO ₂ /MWh)	Cumulative output (MWh)	Normalized cumulative output, %
Barbuda power plant	8,917.68	0.92	8,917.68	0.01
Wadadli Power Plant	205,280.04	0.78	214,197.72	0.22
Antigua Power	315,998.00	0.61	530,195.72	0.54

Company (APC Plant)				
Antigua Power Company (Black Pine)	452,333.00	0.60	982,528.72	100.00%

The grid emission factor for Antigua and Barbuda: **0.6035 tCO₂ / MWh**. Please see attached Excel file for details on the calculation.

Use of the proposed standardized baseline with approved or proposed new or revised methodology(ies)

Explain how the proposed standardized baseline will be used together with the valid version(s) of a relevant approved methodology(ies) or proposed new/revised methodology(ies).² Describe how a standardized baseline derived from the "Guidelines for the establishment of sector specific standardized baselines" will replace the sections of demonstration of additionality, identification of the baseline scenario and/or the determination of baseline emissions in the methodology.

The standardized baseline will be used to estimate the emission reduction potential of renewable energy generation.

Renewable energy technologies, having an emission factor of zero, are less greenhouse gas intensive than any of the technologies used to produce aggregately more than 90% of the output of the power sector in Antigua and Barbuda.

This standardized baseline will also be applicable to energy efficiency projects and measures. The emission reduction potential of the energy savings will be calculated using this factor.

Validity of the proposed standardized baseline

State the period of time for which the proposed standardized baseline is valid taking into account the provisions of the "Standard for determining coverage of data and validity of standardized baselines" and Appendix I to the "Guidelines for the establishment of sector specific standardized baselines".

The data vintage for calculation the standardized baseline, i.e. the grid emission factor (GEF), covers 2012, 2013 and 2014.

The SBL shall be valid for a period of 3 years from the data of its adoption. The SBL will be updated every three years after that base on the most recent available information on the operation of the grid in Antigua and Barbuda at the time of the update as well as the relevant methodological tools and guidelines.

Deviations from the guidelines (if applicable)

Provide descriptions of and justifications for the necessity and the appropriateness of any deviations from the "Guidelines for the establishment of sector specific standardized baselines" to develop the proposed standardized baseline.

Not applicable

² The "Guidelines for completing the proposed new baseline and monitoring methodologies form" provide guidance on the sections of the proposed new baseline and monitoring methodologies form that should be filled to develop a methodology that will only be used together with a standardized baseline.

References and any other relevant information

- Excel – Data template for standardized baselines of power sector (CDM-SBDT-PS-FORM)
- Quality Control (QC) Report



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

Complete this section only when the proposed standardized baseline is developed using a methodological approach contained in the valid version of an approved methodology or in a proposed new or revised methodology(ies). An example of this is "AM0070: Manufacturing of energy efficient domestic refrigerators" to standardize the specific energy consumption of domestic refrigerators in the host country.

Not applicable

Applicability of the proposed standardized baseline

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, document transparently the geographical boundaries of the region (e.g. provinces, electric grids, etc.).

Additionality standardization (if applicable)

Explain how the methodological approach contained in the valid version of the approved methodology(ies) or in the proposed new or revised methodology(ies) was applied to standardize additionality criterion for project activities or programmes of activities using the methodology. Document all the underlying data, data sources, assumptions, steps and outcomes in a clear and transparent manner.

Baseline identification (if applicable)

Explain how the methodological approach contained in the valid version of the approved methodology(ies) or in the proposed new or revised methodology(ies) was applied to identify the baseline. Document all the underlying data, data sources, assumptions, steps and outcomes in a clear and transparent manner.

Baseline emission parameter standardization (if applicable)

Explain how the methodological approach contained in the valid version of the approved methodology or in the proposed new or revised methodology was applied to standardize the baseline emission parameter (e.g. baseline specific energy consumption, baseline emission factor) of a project activity or programme of activities. Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.

Use of the proposed standardized baseline with the approved or proposed new or revised methodology

Explain how the proposed standardized baseline will be used with the valid version of the approved methodology(ies) or proposed new or revised methodology(ies) to estimate emission reductions. Explain which parts of the methodology(ies) are replaced by the proposed standardized baseline.

Validity of the proposed standardized baseline

State the period of time for which the proposed standardized baseline is valid in accordance with the requirements contained in the "Standard for determining coverage of data and validity of standardized baselines".

Deviations from the approved methodology (if applicable)

Provide a description of and justification for the necessity and the appropriateness of any deviation from the valid version of the approved methodology to develop the proposed standardized baseline. Also justify why a revision of the valid version of the approved methodology is not necessary.

References and any other relevant information

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

Complete this section only when the proposed standardized baseline is developed using a methodological approach contained in the valid version of an approved methodological tool or in a proposed new or revised methodological tool (an example of this is the application of the "Tool to calculate the emission factor for an electricity system" to estimate the CO₂ emission factor of an electricity grid).

Not applicable

Applicability of the proposed standardized baseline

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, document transparently the geographical boundaries of the region (e.g. provinces, electric grids, etc.).

Baseline parameter standardization

Explain how the methodological approach contained in the valid version of the approved methodological tool or in the proposed new or revised methodological tool was applied to standardize the baseline parameter (e.g. baseline emission factor). Document all underlying data, data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.

Validity of the proposed standardized baseline

State the period of time for which the proposed standardized baseline is valid in accordance with the "Standard for determining coverage of data and validity of standardized baselines".

Deviations from the approved methodological tool (if applicable)

Provide descriptions of and justifications for the necessity and the appropriateness of any deviations from the valid version of the approved methodological tool to develop the proposed standardized baseline. Also justify why a revision of the valid version of the approved methodological tool is not necessary.

References and any other relevant information

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

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

Not applicable

Applicability of the proposed standardized baseline

Provide the information on 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, document transparently the geographical boundaries of the region(s) (e.g. administrative units, geo-referenced coordinates).

Additionality standardization

Explain how the “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM” was applied to standardize the additionality criterion for afforestation and reforestation CDM project activities undertaken in the areas of land included under the scope of the proposed standardized baseline. Document all relevant data sources, assumptions, steps and outcomes in a clear and transparent manner.

Baseline land-use scenario identification

Explain how the “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM” was applied to identify the baseline land-use scenario of afforestation and reforestation CDM project activities undertaken in the areas of land included under the scope of the proposed standardized baseline. Document all relevant data sources, assumptions, steps and outcomes in a clear and transparent manner.

Standardization of baseline carbon stocks and GHG removals estimation (if applicable)

Explain how the “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM” was applied to standardize the estimation of baseline carbon stocks and GHG removals of applicable afforestation and reforestation CDM project activities undertaken in the areas of land included under the scope of the proposed standardized baseline. Document all relevant data sources, assumptions, calculation steps and outcomes in a clear and transparent manner.

Land eligibility demonstration (if applicable)

Explain whether eligibility of the lands included under the scope of the proposed standardized baseline for the CDM is confirmed by the proposed standardized baseline. If not, 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,

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

Validity of the proposed standardized baseline

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

Deviations from the guideline (if applicable)

Provide descriptions of and justifications for the necessity and the appropriateness of 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 relevant information



Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	1 September 2015	<p>Revision to:</p> <ul style="list-style-type: none"> • Reflect updated requirements in the version 04.0 of "Procedure: Development, revision, clarification and update of standardized baselines" (CDM-EB63-A28-PROC) ; • Include editorial improvement.
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.
Decision Class: Regulatory Document Type: Form Business Function: Methodology Keywords: standardized baselines		