



## 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.)*

<b>Title of proposed standardized baseline:</b>	Jamaica Grid Emission Factor
<b>Reference of proposed standardized baseline:</b>	PSB0049
<b>Name(s) of the Party or Parties to which the proposed standardized baseline applies:</b>	Jamaica
<b>Name(s) of the proponent(s) of the proposed standardized baseline:</b>	Ministry of Economy, Growth and Job Creation
<b>History of the submission &amp; assessment:</b>	1) 28/02/2019: First submission was received 28/03/2019: Initial assessment was finalized 2) 24/05/2019: Findings submitted to the DNA 3) 06/06/2019: Second submission was received 21/06/2019: Its assessment was finalized
<b>Conclusion:</b> <b>(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”</b>  <b>(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”:</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A  <input type="checkbox"/> One of the four approved approaches: <input type="checkbox"/> The “Guidelines for the establishment of sector specific standardized baselines”; <input type="checkbox"/> A methodological approach contained in an approved baseline and monitoring methodology; <input checked="" type="checkbox"/> A methodological approach contained in an approved methodological tool; <input type="checkbox"/> The “Guideline: Establishment of standardized baselines for afforestation and reforestation project activities under the CDM”.
<b>Date when the assessment report is completed:</b>	21/06/2019

## 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. The sector to which this PSB applies is energy industries sector, which includes electricity generation/consumption.
3. The PSB applies to the following measures:
  - (a) ☐ Fuel and feedstock switch;
  - (b) ☒ Switch of technology with or without change of energy source (including energy efficiency improvement);
  - (c) ☐ Methane destruction;
  - (d) ☐ Methane avoidance
4. Projects shall use standardized baseline together with the approved methodologies which refer the "TOOL07: Tool to calculate the emission factor for an electricity system".

### A.2. Description of the proposed standardized baseline

5. Key data parameters and data sources:

Key data parameters (e.g. total production of output, kiln technology, fuel type & consumption etc.)	Data sources (e.g. individual facilities, government documents, literature etc.)
Total net annual electricity generation by each power plant	Data published by the Ministry of Science, Energy and Technology. <a href="https://www.mset.gov.jm/statistics-data">https://www.mset.gov.jm/statistics-data</a> The web-site only provides the information from the power plants belonging to JPS, which does not include the IPPs (e.g. Wigton). The Ministry of Science, Energy and Technology has the list of power plants installed in Jamaica.
Total fuel consumption	Data published by the Ministry of Science, Energy and Technology. <a href="https://www.mset.gov.jm/statistics-data">https://www.mset.gov.jm/statistics-data</a> The Ministry of Science, Energy and Technology has the detailed information on the fuel consumed by each power plant.

Key data parameters (e.g. total production of output, kiln technology, fuel type & consumption etc.)	Data sources (e.g. individual facilities, government documents, literature etc.)
Net Calorific Value of the different fuel types consumed	2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2, Chapter 1, Table 1.2 & Table 1.4
Fuel CO <sub>2</sub> emission factor	2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2, Chapter 1, Table 1.2 & Table 1.4

6. The scope and coverage of the data:

- (a) The data include key information of each facility (name, region, output type, production, fuel type/consumption and technology);
- (b) The data represent all power plants connected to the electric system of Jamaica;
- (c) The data represent three years (2014, 2015 & 2016). This vintage is in line with the requirements of data currentness since the SB was submitted in 2019 – most recent year of the coverage period is 2016.
  - (i) For Operating Margin (OM) calculation, as low cost/must run plants constitute less than 20 per cent of total electricity generation during the five most recent years (2016 – 2012), the Simple OM method is selected;
  - (ii) The Build Margin (BM) is calculated using the data for power plants that comprises 32.8 % of generation

7. The DNA uses a simplified data template prepared by the Secretariat.

8. The PSB applies the following assumptions (and/or conservative approaches) in order to process the data

- (a) Option A2 to calculate the operating margin emission factor was applied only to the power EAL since data on fuel consumed was not available;
- (b) The following NCVs are applied for Gas/Diesel Oil and Residual Fuel Oil, respectively: 41.4 TJ/Gg and 39.8 TJ/Gg;
- (c) The following CO<sub>2</sub> emission factors are applied for Gas/Diesel Oil and Residual Fuel Oil, respectively: 72.6 tCO<sub>2</sub>/TJ and 75.5 tCO<sub>2</sub>/TJ.

## SECTION B. Summary of Assessment

### B.1. Assessment process

- 9. 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); ii) to ensure that the PSB complies with one of the approved approaches.
- 10. 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.
11. A desk review was performed on the following data/information submitted as part of the PSB.
- (a) First submission dated 28/02/2019 which was successful in the initial assessment included:
    - (i) PSB form (F-CDM-PSB), version 1.0 dated 23/01/2019
    - (ii) Quality control (QC) Report, dated 27/02/2019;
    - (iii) Grid emission factor calculation spreadsheet “Jamaica GEF\_PostTelecon 20180717.xlsx”, not dated.
  - (b) Assessment findings were communicated to the DNA on 24/05/2019.
  - (c) Second submission dated 06/06/2019 included the responses to the findings in the Appendix 1 of this report. This submission clarified all issues raised by the secretariat.

**B.2. Assessment opinion:**

12. In accordance with the QA/QC guidelines, the secretariat concluded that the all 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.
  - (b) QC activities were clearly documented (in the QC report).
  - (c) Consultation process took as part of the J-CCCP/UNFCCC Training workshop and public consultation on developing standardized baseline. Stakeholders from the private and public sectors, (consultants, JPS, from the Ministry of Science, Energy and Technology, from the National Water Commission – NWC) were invited to provide inputs and comments.
  - (d) All relevant documents and data were available for assessment.
  - (e) The data key sources were government authorities, which collected credible data in accordance with their national standards and procedures.
  - (f) The data scope was comprehensive enough to produce “true and fair” representative SB in the particular sector.
  - (g) The key data and information are consistently presented.

- (h) The data vintage (3 years) was met as per the provisions of the “Standard for data coverage and validity of standardized baselines”.
  - (i) The assumptions and conservative approaches for data processing and calculations were justified.
  - (j) There were no confidential data but the data file would be presented in an anonymous form.
13. 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.
14. The secretariat concluded that the PSB complied with the approach of the “TOOL07: Tool to calculate the emission factor for an electricity system”, version 6.0. Therefore, the emission factors (OM, BM and CM) derived in the PSB is assessed to be accurate.

## Appendix 1. Findings and resolutions

CL No.	Request for 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 (open/closed)
2	<b>Power plants</b> The JPS website, in the section "Power Plants" ( <a href="https://www.jpSCO.com/power-plants/">https://www.jpSCO.com/power-plants/</a> ) lists 13 power plants. However, the PSB form indicates that 32 power plants are connected to the electric grid of Jamaica. The DNA is required to clarify this difference in the number of power plants.	Consistency (Para 15c) of the QA/QC Guidelines version 2.0.	The Jamaica Public Service Company Limited (JPSCO) website lists the sites for JPSCO plant sites/locations. Each site/location may contain more than 1 power plants (for instance Bogue or Rockfort). In addition, the JPSCO website does not include the power plants of the Independent Power Producers (for instance Wigton Windfarm Jamaica Limited or Jamaica Energy Partners Limited). The Energy Division in the Ministry of Science, Energy and Technology has an in-house database with all the power plants connected to the electric grid of Jamaica and had provided the list which was confirmed by JPSCO and the Office of Utilities Regulation (OUR).	Closed
3	<b>Source of NCV</b> The QC report indicates that NCV values have been sourced from IPCC 2006 Guidelines for National GHG Inventories. However, the calculation spreadsheet Reference1_NCV&EF".indicates the local values were used for HFO and LFO, values of 19,000 Btu/lb for HFO and 18,794 Btu/lb for LFO, and no source has been provided. " The DNA is required to clarify what is the source of these local values	Consistency (Para 15c) of the QA/QC Guidelines version 2.0.	Although this information is reported, the NCV and CO2 emission factor are being sourced from the IPCC.	Closed
4	<b>Outliers</b> CO <sub>2</sub> emission factors per MWh of recent GT plants were observed	Conservativeness (Para 15h) of the QA/QC Guidelines version 2.0.	JAMALCO Cogen: there was a strategic change in the operation of the power plant, whose focus was shifted from the production of electricity to the production of overheated	Closed

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	<p>higher than 1.0 tCO<sub>2</sub>/MWh e.g.:</p> <ul style="list-style-type: none"> <li>- Jamalco COGEN, 2016 (1.67 tCO<sub>2</sub>e/MWh);</li> <li>- Hunts Bay GT5, 2016 (1.22 tCO<sub>2</sub>e/MWh);</li> <li>- Hunts Bay B6, 2014 (1.13 tCO<sub>2</sub>e/MWh);</li> </ul> <p>The DNA is required to clarify these outliers.</p>		<p>steam. Therefore, the decrease in the generation of electricity is justified.</p> <p>Hunt's Bay GT5: during 2016, the power plant went on maintenance for approximately 3 months. The increase in the CO<sub>2</sub> emission factor can be justified as a result of (i) inefficient operation right before the stoppage to maintenance, and (ii) start-up of the plant.</p> <p>Hunt's Bay B6: during 2014, the plant was out of regular operation for 3 months – for two months the electricity generated and supplied to the grid was extremely low and for one month the plant was completely out of operation.</p>	

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### Document information

Version	Date	Description
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		