# Status of the CDM

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**Team Lead**
**Regional Collaboration Centre St. George's**

# Outline

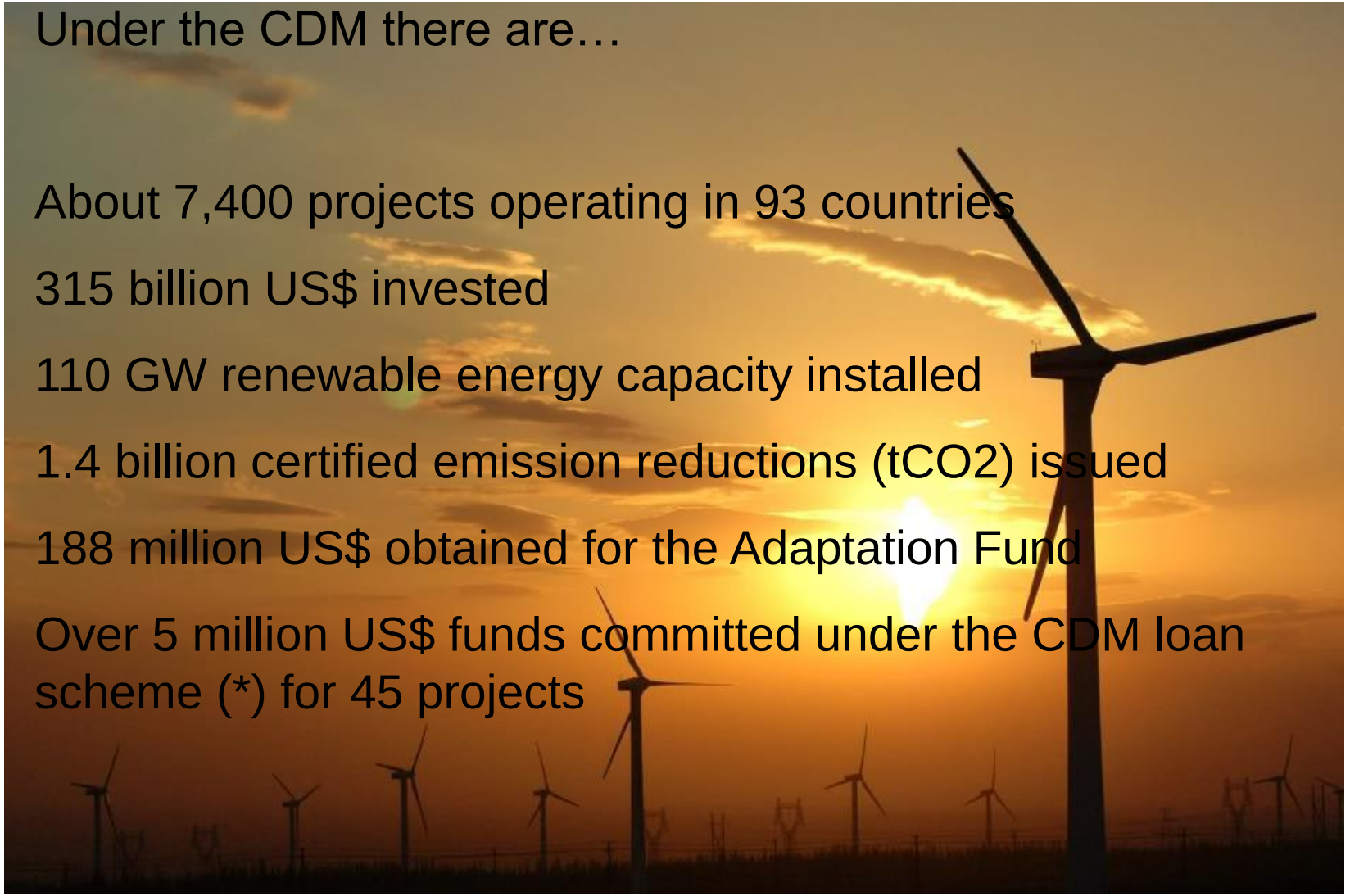
- **The past**
- **The present**
- **The future**

## The past – from 1979 to 2012

| 1979 | 1992 | 1997 | Nov/2001 | Nov/2004 | Nov/2005 | 2012 |
|---|---|---|---|---|---|---|
| 1st World Climate Conference, **the issue** | UN-FCCC 195 countries **CDM idea** | Kyoto Protocol 100 countries **CDM concept** | **CDM framework** COP7, Marrakesh | **1st CDM project Landfill gas Brazil** | Kyoto Protocol Ratified, 192 countries | **End KP period**, 2008-2012 |

## What is the CDM?

## The present – CDM in numbers




(*) PDD consultancy, validation or verification. Next window: 01-03/2014

## The present – CDM Development Benefits





Source: http://cdm.unfccc.int/about/ccb/index.html

## The present – Challenges

- Lack of targets for second commitment period of the Kyoto Protocol
- Due to uncertainty in the market carbon prices have gone down: from 20 to less than 1 US$/CER
- Unbalance regional distribution- 20 CDM in Caribbean, 50% in Dominican Republic
  - Complexity of CDM process
  - High transaction costs

## Initiatives at the CDM Executive Board level

- Capacity building
  - Regional trainings, forums, & workshops for host governments, participants, and certifiers.
- Technical - Flexibility of regulatory framework
  - Programme of activities, PoAs
  - Micro-scale and automatic additionality
- Financial
  - CDM loan scheme- to cover CDM costs
- **Regional Collaboration Centres**
  - CDM project cycle
  - Standardized baselines for sectors

## Regional Collaboration Centres

- Aimed to
  - Fill the CDM ‘technical’ gaps→ technical support
  - Serve as a hub of information→ by elaborating on rules & procedures → Reduce transaction costs

- In 2013 four centres have been established
  - West Africa, RCC Lomé, Togo
  - East Africa, RCC Kampala-Uganda
  - Latin America, RCC Bogotá-Colombia
  - Caribbean, RCC St. George’s-Grenada

- Free **technical support**
  - Advising on CDM process or drafting proposals
- **Enabling** an investment environment
  - Designing umbrella CDM projects for:
    - Renewables and waste technologies
- **Platform** for developers, carbon buyers, donors and governments
- **Collaborating** with country & regional funding agencies to:
  - Standardized baselines- electricity sector: Grenada, Dominican Republic and St. Vincent
  - Prepare and provide policy inputs: Landfill gas use

# THE FUTURE – IT IS WHAT YOU MAKE OF IT

## The future – Emerging carbon markets

- CDM is a mature mechanism
- It established a universal currency – trading unit (CERs)

Efforts are focused to:

- Support the use of CERs outside the CDM regulatory market → **Voluntary cancellations of CERs**
- Link the CDM into **evolving** carbon markets, emissions trading systems and sectoral programmes (NAMAs)
- Establish the CDM as a delivery vehicle for **development and climate finance**, such as via Green Climate Fund
- Use CDM as a tool for **monitoring, reporting & verifying**

## The future- Why Caribbean stakeholders should get involved in CDM?

- Taking time to prepare for what is coming→ opportunities
- Obtaining free technical support → RCC St George's
- Seeking financial support for CDM costs → CDM loan scheme

- Support country economic development
- Enhance financial opportunities
  - Benefits from premium carbon prices for Caribbean countries

- **Simplification of…**
  - Procedures – project cycle. E.g.: Validation at verification for small & micro-scale activities
  - Regulations – validation of automatically additional projects such as micro-scale ones. E.g.: Renewable energy < 5MW in SIDS

- **Lessons learned from DNAs…**
  - Local stakeholder consultations-how has it been carried out?
  - Assessment of sustainable development benefits. E.g.: Applying Sustainable Development Tool

- **Continuing supporting regional distribution by…**
  - Seeking voluntary contributions to the CDM Loan Scheme

**Technical paper:**

Draft deadline: 19 March 2014

Public inputs deadline: 30 April 2014

To be discussed: June 2014 (SBI 40)

# Thank you!

# ?

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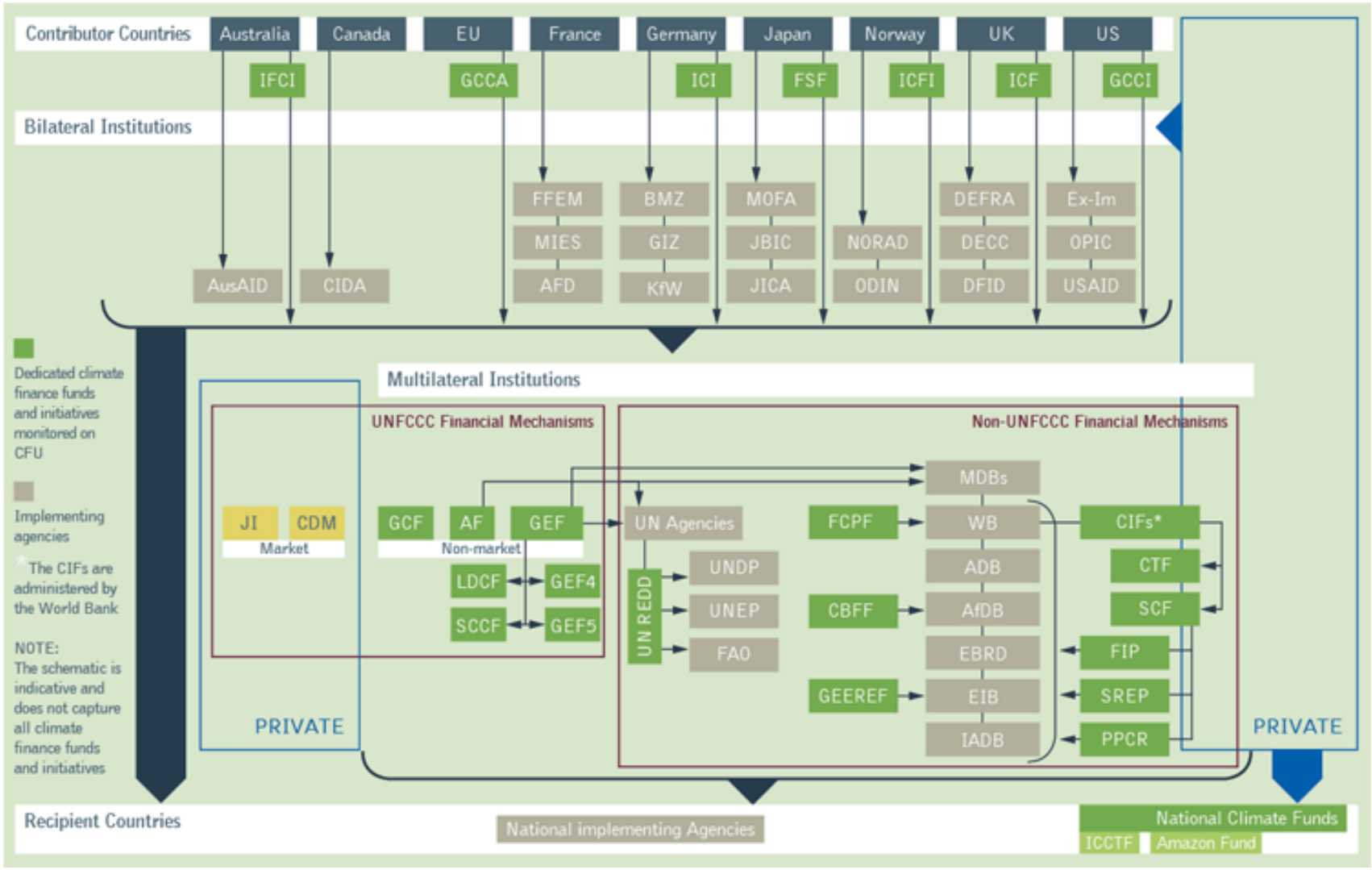
# The present – Maize of funding opportunities



# CDM Standardized Baseline Approach

**Technical Workshop on CDM Standardized Baselines Approach – Electricity Sector**

Santo Domingo, 6 December 2013

Karla Solís

Team Lead, RCC St. George's

- Standardized baselines approach
- Standardized baselines cycle
- Steps to develop standardized baselines for electricity sector
- QA/QC processes
- Updates

## Standardized baselines approach

"*a baseline established for a Party or a group of Parties to **facilitate** the **calculation of emission reduction** and removals and/or the **determination of additionality** for clean development mechanism project activities, while providing assistance for assuring environmental integrity*" (Definition from decision 3/CMP.6.)

**What can we do with standardized baselines?**

- ✓ Establishes baseline; and/or
- ✓ Determines additionality; and/or
- ✓ Determines carbon emission factor.

**Why standardised baselines ?**

- ➢ Reduce transaction costs;
- ➢ Facilitate access to the CDM to unrepresented regions;
- ➢ Cover a range of activities under a sector.

## Key terms for standardized baselines

**Measure**

A range of GHG emission reduction activities.

**Sector**

A segment of a national economy that delivers defined output(s). E.g. Power generation, clinker manufacturing, etc.

**Output, Oi**

Sectoral goods or services with comparable quality, properties and application areas. E.g. Electricity generation, MWh/year; clinker production, tonnes/year.

**Threshold**

For electricity sector refers to cumulative percent of output (Oi) for the sector to determine additionality and baseline; Ya and Yb respectively.

## Measures (sectors) covered

**There are four types of measures:**

1. Fuel and feedstock switch
   → Changing woodchips for charcoal in rural areas of Uganda

2. Switch of technology (including energy efficiency improvement)
   → Changing diesel engines to wind farms

3. Methane destruction
   → Capture and use of landfill gas instead of direct release to the atmosphere

4. Methane formation avoidance
   → Composting in municipal solid waste sector

# A measure…..

## A measure is deemed additional, if

- It emits less carbon than default threshold (e.g. Ya in Measure 2);
- It is less commercially attractive;
- It is not mandatory by national or sub-national regulation; and
- Relevant CDM Executive Board clarifications are considered.

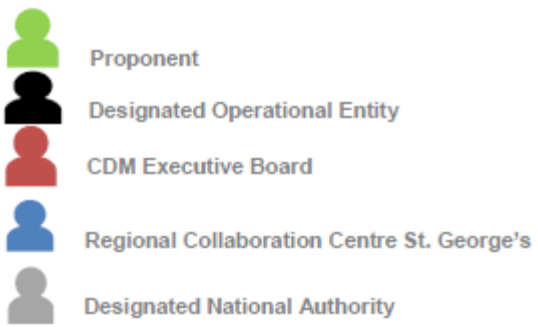
## Baseline for a measure is

- The default threshold (e.g. Yb in Measure 2).

## Baseline emission factor is

- Carbon emission factor of the default threshold (e.g. Carbon emission factor of Yb in Measure 2).

# Standardized baselines cycle – Five key steps





By identifying host country(ies), sectors, output(s) and measures; and
By selecting one or multiple options below:
- Establishing additionality criteria for the identified measures;
- Identifying the baseline for the measures;
- Determining the baseline emission factor.

Relevant data to be used to establish the proposed standardized baseline (PSB) shall be provided in a sector-specific data template. Completed Form, Data Delivery Protocol and Quality Control Report shall also be provided.

The designated national authority (DNA) of a Party for which the standardized baseline is proposed shall approve the submission.

# Standardized baselines cycle – Five key steps

**FREE Assessment Report!***

**Legend:**

- Proponent
- Designated Operational Entity
- CDM Executive Board
- Regional Collaboration Centre St. George's
- Designated National Authority

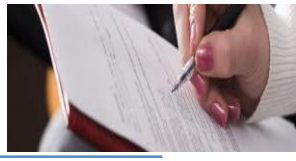

Where applicable, the quality of the data is validated and an Assessment Report is prepared by a private certifier, known as designated operational entity (DOE). DNA submits the PSB to: sdm-ssu-methworkflows@unfccc.int.

Once adopted by the CDM Executive Board, standardized baseline is valid for maximum 3 years. Subsequent update shall include data of the 3 most recent years.

**From submission to adoption of SB: 6-12 months.**

* Assessment Reports of first three submissions by a country with less than 10 projects as on 31 December 2010 will be prepared by UNFCCC.

# Preparing Submission



- Documentation required for submission:
  - ✓Submission form, F-CDM-PSB
  - ✓Quality Control (QC) Report, describing reliability of data
  - ✓Data Delivery Protocol (DDP), describing delivery of data to DNA
  - ✓Data, using sector-specific data template

# Steps to develop standardized baselines for electricity sector

**Step 1: Identify host country(ies), sectors, output(s) and measures**

Country: Moonland,
Sector: Power generation sector,
Output: in MWh,
Measure: Measure 2 - Switch of technology with or without change of energy sources (including energy efficiency improvement).

Moonland Energy Agency has provided grid data to establish the standardized baseline. Please refer to the table below.

| Plant | Type of power generation arranged in descending order of carbon intensity | Capacity | Default IPCC $CO_2$ emission factor | Power generation | Emissions | Emission Factor |
|---|---|---|---|---|---|---|
| | | MW | $tCO_2/TJ$ | GWh/year | $tCO_2$/year | $tCO_2$/GWh |
| A | Coal-based | 25 | 94.6 | 186 | 264,147 | 1,419.0 |
| B | Coal-based | 25 | 94.6 | 186 | 243,828 | 1,309.8 |
| C | Diesel generator | 8 | 74.1 | 63 | 44,277 | 702.0 |
| D | Diesel generator | 5 | 74.1 | 37 | 23,938 | 650.6 |
| E | Natural gas turbine | 12 | 56.1 | 44 | 27,864 | 631.1 |
| F | Natural gas turbine | 16 | 56.1 | 98 | 58,279 | 594.0 |
| G | Natural gas turbine | 30 | 56.1 | 210 | 121,314 | 577.0 |
| H | Natural gas based engine | 8 | 56.1 | 62 | 27,678 | 448.8 |
| I | Natural gas based engine | 6 | 56.1 | 44 | 19,153 | 439.0 |
| J | Solar PV | 8 | 0 | 70 | - | - |
| **Total** | | | | **1,000** | | |

# Steps to develop SB for electricity sector

**Step 2: Establish additionality criteria for the identified measures**

As per paragraph 26 of the guidelines the cumulative percent of output Oi (1,000 GWh/year), produced based on technologies is arranged in descending order of carbon intensity of the technologies and the following graph is derived.

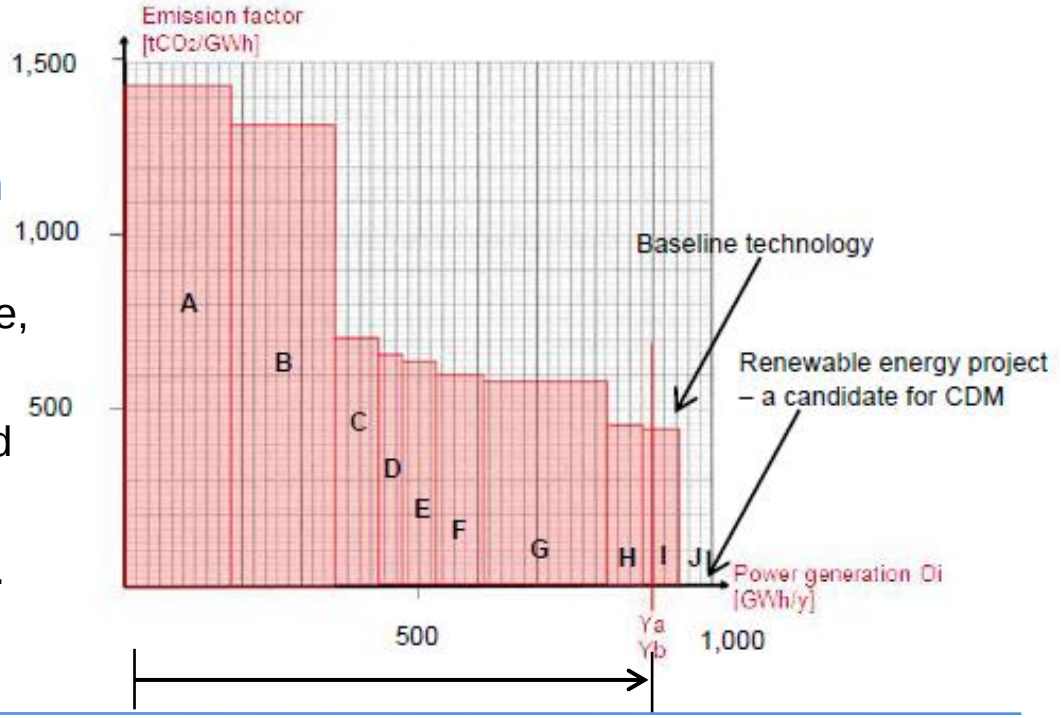
To be deemed additional, technologies need to

(i) emit less than 439 tCO2/GWh (e.g. renewable energy),

(ii) be less commercially attractive,

(iii) be not mandatory by national or sub-national regulation, and

(iv) consider relevant CDM Executive Board clarifications.



# Steps to develop SB for electricity sector

**Step 3: Identify the baseline for the measures**

As per Appendix I, Yb is set at 90% of the cumulated output of the sector. Therefore, Yb = 1,000*90% = 900GWh/year. The baseline is natural gas based engine. Emission reduction of CDM projects that replace grid electricity (e.g. a wind farm) can be calculated with reference to this baseline.

**Step 4: Establish a baseline emission factor**

By applying guidelines, the deemed baseline emission factor for the sector (Yb%) would be 439 tCO2/GWh. CDM projects that replace grid electricity (e.g. a wind farm) can calculate their emissions credits (CERs) on the basis of the difference between the emission factor of the electricity grid (439 tCO2/GWh) and the project emission factor, multiplied by the amount of electricity produced.

Ya = Cumulative percent of output Oi for the sector to determine additionality

Yb = Cumulative percent of output Oi for the sector to determine baseline

# QA/QC processes

**Quality Control (QC)**

- routine activities to measure and control quality of data
- includes accuracy checks and templates for calculations.
- implemented by the **DNA**

**Quality Assurance (QA):**

- external review and audit procedures
- checks QC activities were followed.
- conducted by **people not involved in QC activities** (e.g. DOE).

Overall QA/QC system helps collect and manage data and provides confidence in the SB calculation.

# Who do QA/QC guidelines apply to?

## DNAs

- Set up QA/QC system
- Develop, validate or own datasets used to establish SB

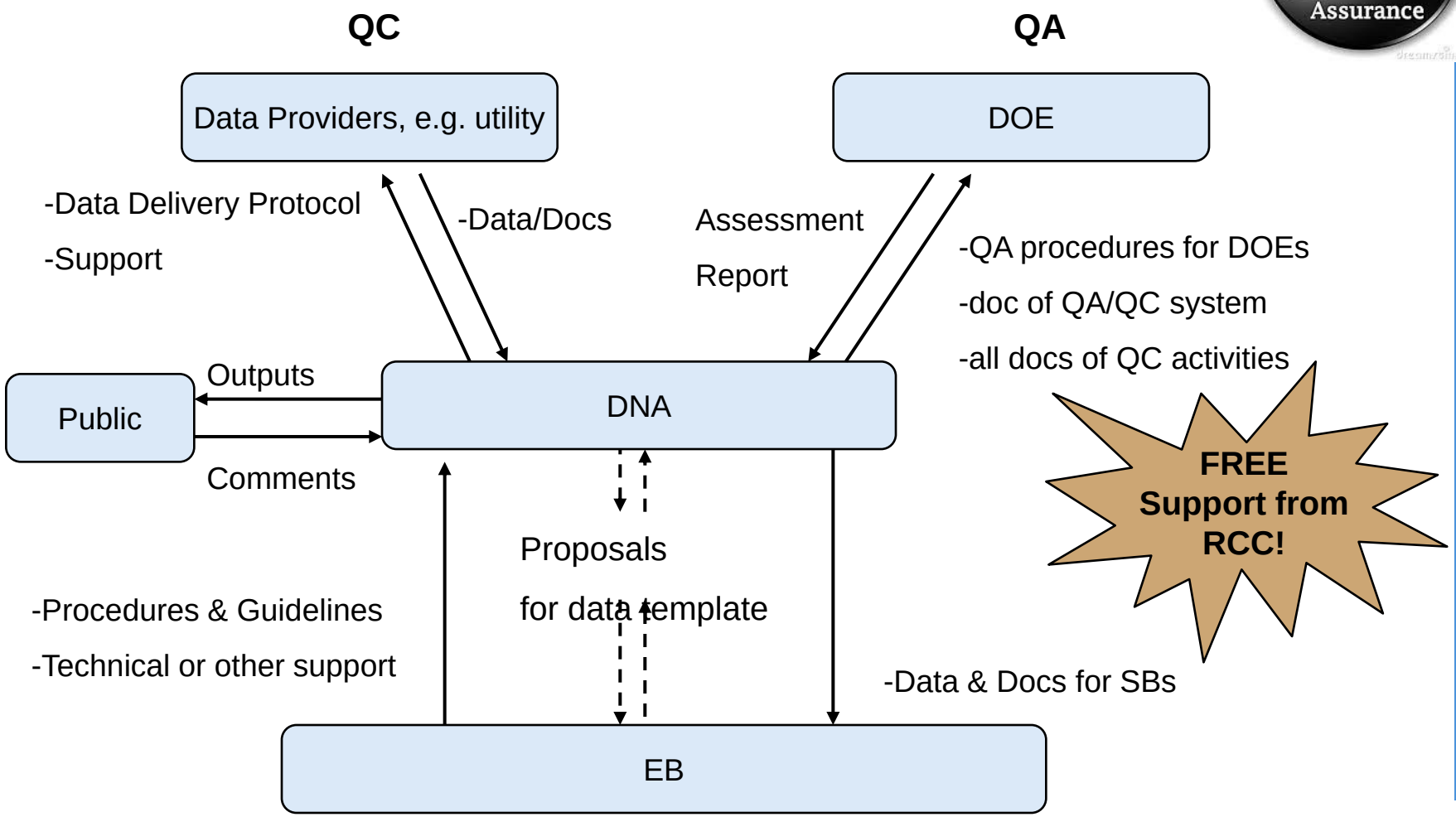
## DOEs

- Assess the quality of the QA/QC system, rather than quality of specific data.
- (could be the Secretariat)

## SB developers

- Calculate SB.
- Accepts QA/QC responsibilities, if data collection and management is outsourced.

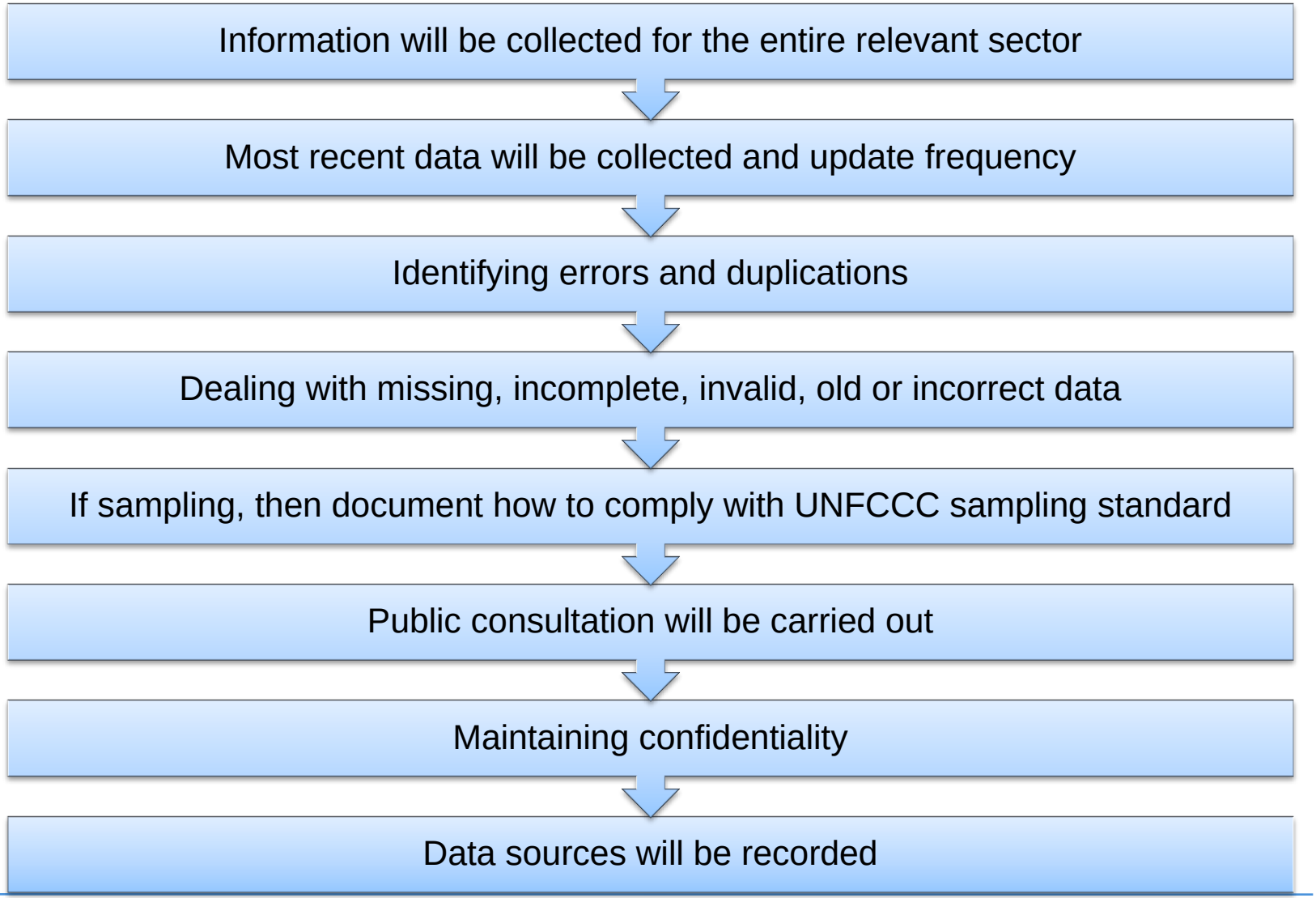
# QA/QC processes for Data to be used for SB development



# QA/QC requirements for Proponents

1. Document QA/QC activities and processes
2. Use data delivery protocols
3. Require data providers to submit summary reports
4. Securely store and archive data
5. Use sector specific data templates
6. Undertake public consultation, report on this
7. Prepare an internal QC report
8. Submit DOE assessment report (if applicable)

# Document QA/QC activities and processes




| Sector/ Measure | Type of SB Approach | Country(ies) | Methodologies/Guidelines |
|---|---|---|---|
| Power (grid emission factor)/2 | Emission Factor | Southern African Region comprising of Nine (9) countries | Tool to calculate the emission factor for an electricity system version 2.2 |
| Charcoal production for consumption in households and SMEs/1,2,3,4 | Additionality Baseline Emission Factor | The Republic of Uganda | Guidelines for the establishment of sector specific standardized baselines (version 2.0)<br><br>Small-scale methodology (AMS-III.BG) |
| Power (grid emission factor)/2 | Emission Factor | Republic of Uzbekistan | Tool to calculate the emission factor for an electricity system version 3.0.0 |
| Rice mill/2 | Additionality Baseline Emission Factor | Cambodia | Guidelines for the establishment of sector specific standardized baselines (version 2.0), Guideline for demonstrating additionality of micro scale project activities (version 4.0), AMS-I.B. |


- **Two** proposed SBs are under process:

| Sector/ Measure | Type of SB Approach | Country | Methodologies or Guidelines used | Status |
|---|---|---|---|---|
| Cement (Clinker production)/ 1,2 | Additionality Baseline Emission Factor | Ethiopia | Guidelines for the establishment of sector specific standardized baselines (version 2.0)<br>ACM0015<br>ACM0003 | Initial assessment |
| Power (grid emission factor)/2 | Emission Factor | Belize | Tool to calculate the emission factor for an electricity system version 3.0.0 | Initial assessment successfully concluded |

# Support in developing SB


- Top down development of three SBs by UNFCCC and to process about eleven submissions from RCC supported regions.
- At secretariat level DNA Help Desk is providing targeted DNAs advice
- RCC St. George's can provide support to develop:
  a) Standardized baseline for grid emission factor for its targeted countries, and
  b) Landfill Gas sector standardized baseline for additionality

# Thank you!

# ?

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# Grid emission factors

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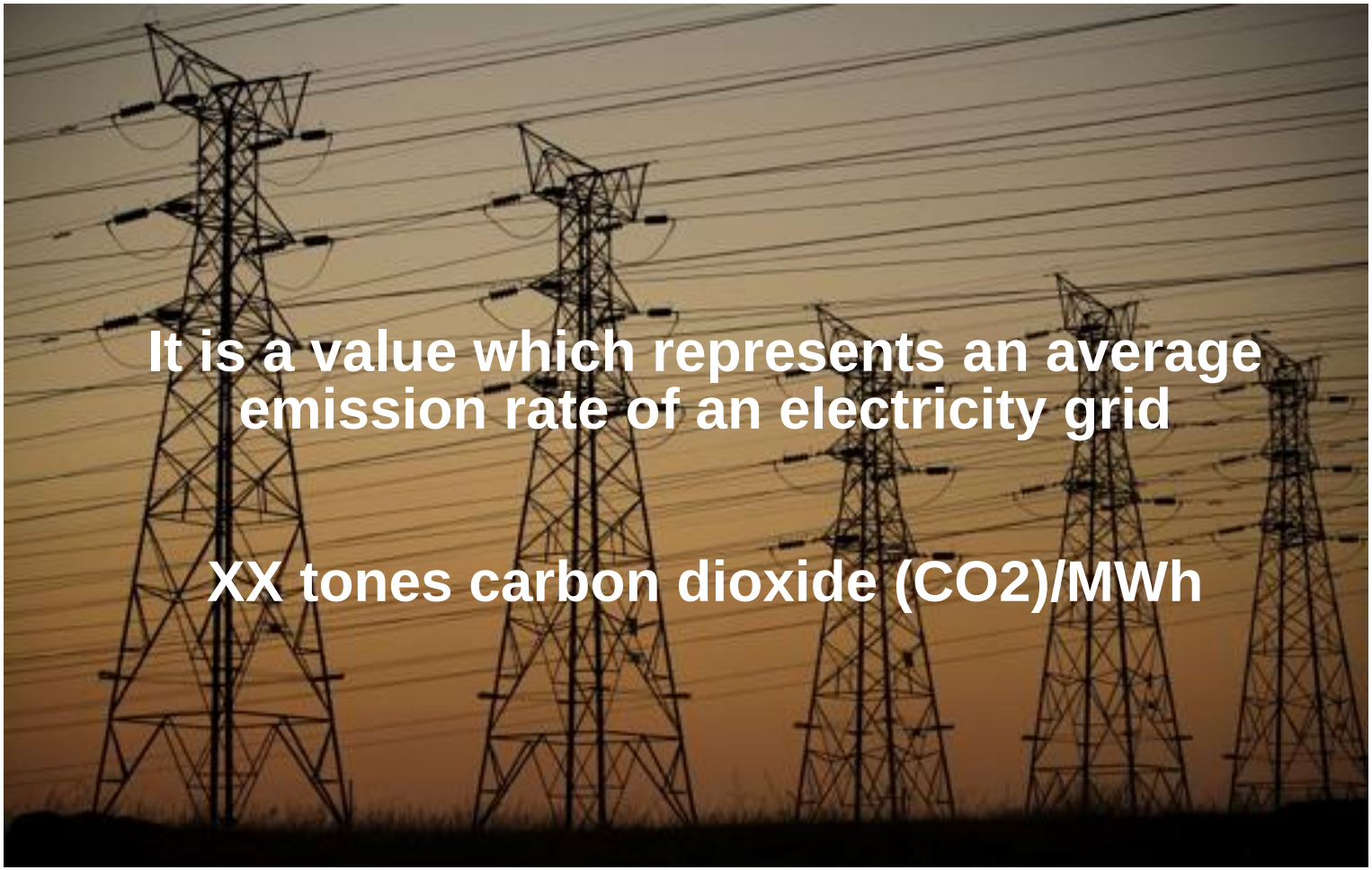
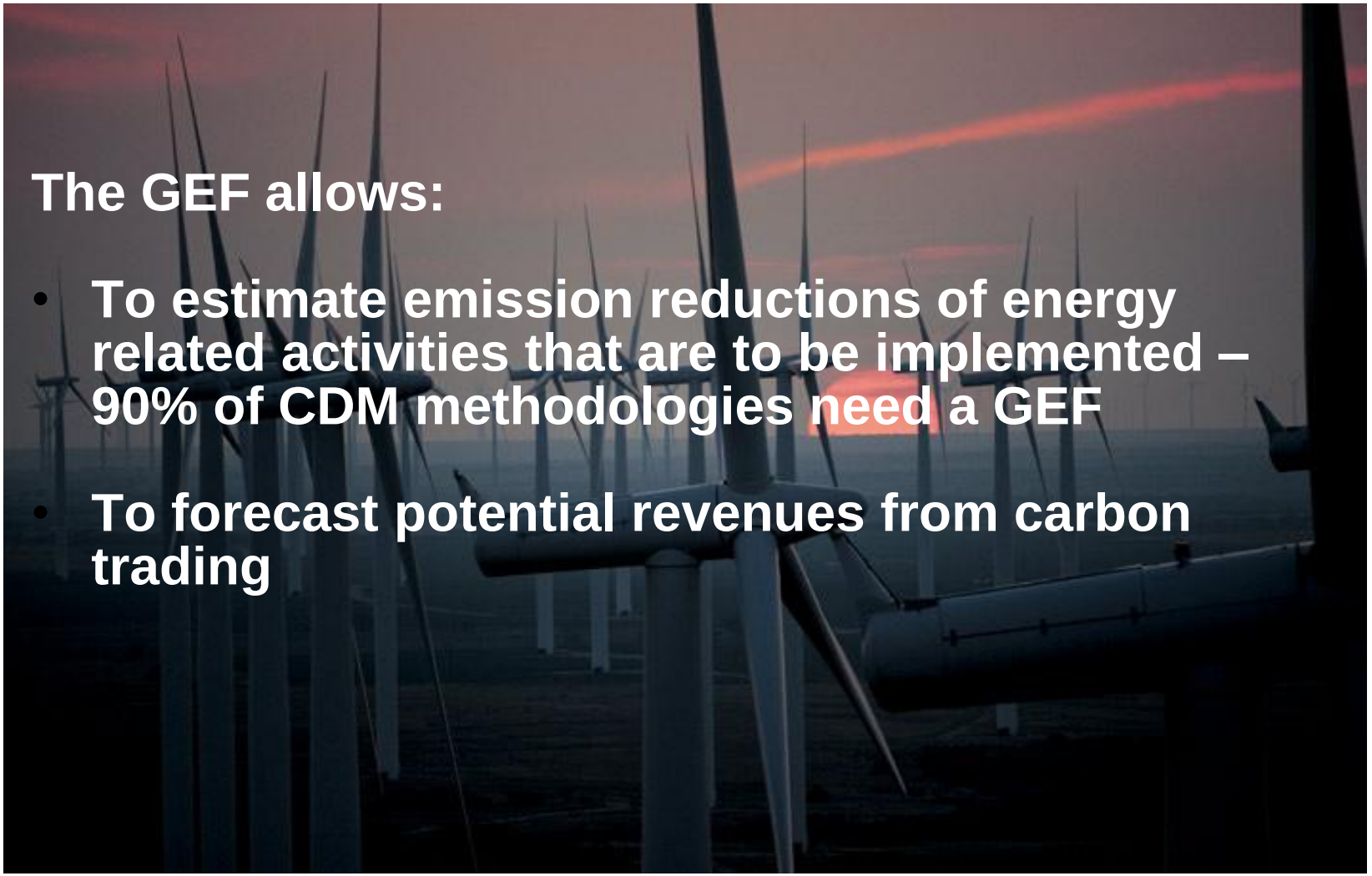
**Regional Collaboration Centre St. George's**

# What is the grid emission factor, GEF?



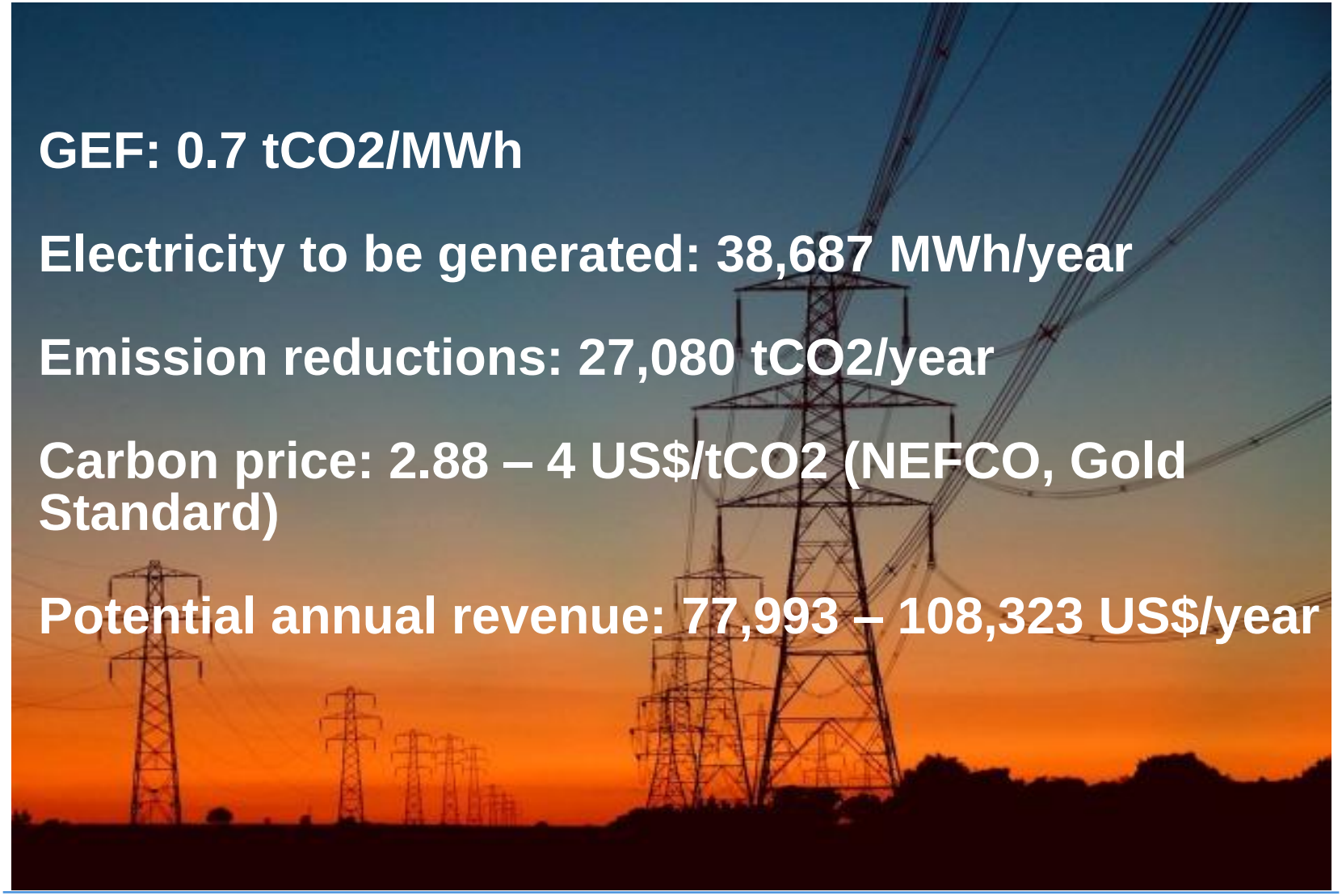
# Why is the GEF important for carbon trading?



**The GEF allows:**

- **To estimate emission reductions of energy related activities that are to be implemented – 90% of CDM methodologies need a GEF**
- **To forecast potential revenues from carbon trading**

# Potential revenues from a 20 MW solar PV



**GEF: 0.7 tCO2/MWh**

**Electricity to be generated: 38,687 MWh/year**

**Emission reductions: 27,080 tCO2/year**

**Carbon price: 2.88 – 4 US$/tCO2 (NEFCO, Gold Standard)**

**Potential annual revenue: 77,993 – 108,323 US$/year**

# How are the GEF values like?

| 0.2 | 0.5 | 0.8 | 1.2 tCO2/MWh |
|---|---|---|---|
| **Hydro** | **NG** | **Diesel** | **Coal** |

## The highest GEF is, the highest CO2 reductions are

# Who are involved with the GEF?

- **Utilities – providing grid data**
- **National authorities – CDM DNA coordinating, clearing the estimation, proposing to the CDM EB, publishing the GEF**
- **RCC – estimating the GEF value**
- **CDM Executive Board – approving the approach used to estimate the value**
- **Project developers/investors – using the GEF value**

# How are GEF estimated?

- **Grid tool, based on a large-scale methodology for renewable energy projects –**

  **Requires grid data at unit level, to update regularly**

- **Sectoral standardized baselines approach, technology switch – electricity sector. E.g. Renewable energy activity**

  **It allows to demonstrate:**

  - **Additionality. E.g.: Barriers due to absence of renewable energy technologies**
  - **Baseline technology. E.g.: Diesel based as electricity is sourced from diesel engines**

  **And to determine:**

  - **Grid factor for baseline technology. E.g.: carbon emission factor (real or default IPCC value) for diesel oil**

  **Requires grid data at plant level, to update every 3 years**

# Thank you!

# ?

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# Application of standardized baselines approach in electricity sector

**Technical Workshop: CDM Standardized Baselines Approach – Electricity Sector**

Santo Domingo, 6 December 2013

Karla Solís

Team Lead, RCC St. George's

# Contents

1) Background (recap)

2) Applicable documents

3) Submission form, F-CDM-PSB

4) QC Report

## What are standardized baselines ?

"*a baseline established for a Party or a group of Parties to **facilitate** the **calculation of emission reduction** and removals and/or the **determination of additionality** for clean development mechanism project activities, while providing assistance for assuring environmental integrity*" (Definition from decision 3/CMP.6.)

# Background

**Scope:**

- Geographic scope: country, group of countries, etc.
- Activity: sector or subsector

**Four types of measures covered:**

1. Fuel and feedstock switch
2. Switch of technology with or without change of energy sources
3. Methane destruction
4. Methane formation avoidance

# Applicable documents

| | |
|---|---|
| Guidelines for the establishment of sector specific standardized baseline (v2.0) | What is a standardized baseline? How to establish a standardized baseline? |
| Establishment of standardized baselines for afforestation and reforestation project activities under the CDM (v1.0) | How to establish an A/R standardized baseline? |
| Guidelines for quality assurance and quality control of data used in the establishment of standardized baselines (v1.0) | Provisions and processing for ensuring data quality (collecting, processing, compiling and reporting) |
| Submission and consideration of standardized baselines (v2.0) | Process for the submission of a proposed SB by DNAs and for consideration by the Board |
| F-CDM-PSB: CDM proposed SB form | Form for SB submission |
| CDM proposed SB initial assessment form | Initial assessment by secretariat |
| CDM recommendation form for proposed SB | Recommendation by secretariat/meth panel |

# Submission form, F-CDM-PSB (*)

- SECTION 1: GENERAL INFORMATION

→Name of the DNA, developer, applicable Party(ies) and sector

- SECTION 2: LIST OF DOCUMENTS TO BE ATTACHED TO THIS FORM (please check)

→Assessment report, LoA in case SB is applicable to multiple Parties and additional documents

- SECTION BELOW TO BE COMPLETED BY THE UNFCCC SECRETARIAT

→ID number, date received, etc.

(*) https://cdm.unfccc.int/Reference/PDDs_Forms/Methodologies/meth_form13.doc

## Sections in F-CDM-PSB

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

→ This section should only be completed when the SB is developed using the “Guidelines for the establishment of sector specific standardized baselines”.

- SECTION B: STANDARDIZED BASELINE DEVELOPED USING A METHODOLOGICAL APPROACH CONTAINED IN AN APPROVED METHODOLOGY OR TOOL

→ This section should only be completed when the SB is developed using a methodological approach to estimate baseline emissions contained in an approved methodology or tool. For example, “Tool to calculate the emission factor for an electricity system” to estimate the emission factor for a electric grid.

# F-CDM-PSB

| SECTION 1: GENERAL INFORMATION | |
|---|---|
| **DNA submitting this form:** | National Council for Climate Change and CDM (CNCCMDL), Dominican Republic |
| **Developer of the standardized baseline:** *(Parties, project participants, international industry organizations or admitted observer organizations)* | National Council for Climate Change and CDM (CNCCMDL), Dominican Republic |
| **Party or Parties to which the standardized baseline applies:** | Dominican Republic |
| **Sector to which the proposed standardized baseline applies:** *(the sector according to the definition of sector in the "Guidelines for the establishment of sector specific standardized baselines")* | Sectoral Scope I: Energy Industries |

If a Designated Operational Entity (DOE) is involved.

| SECTION 2: LIST OF DOCUMENTS TO BE AT[illegible]O THIS FORM *(please check)* |
|---|
| ☐ An assessment report presenting how the data was collected, processed and compiled to establish the proposed standardized baselines; |
| ☐ Where the proposed standardized baseline applies to a group of Parties, letters of approval of all the DNAs of the Parties to which the standardized baseline applies; |
| ☒ Additional documentation supporting the submission (e.g. relevant data, documentation, statistics, studies, calculation tables, etc.), when applicable. |

# F-CDM-PSB

| | |
|---|---|
| **Name of authorized officer signing for the DNA:** | Mr. Moisés Alvarez |
| **Date and signature for the DNA:** | |
| **Name and contact details of the focal point(s) for any follow up communication:** *(all communication regarding procedural or technical issues will be sent to the focal point(s))* | Mr. Moisés Alvarez<br><br>National Council for Climate Change and Clean Development Mechanism (CNCCMDL)<br>Grucomsa building, 5th floor<br>Ave. Winston Churchill No. 77<br>Santo Domingo, Dominican Republic<br>moisesal.c21@gmail.com<br>onmdl@cambioclimatico.gob.do<br>m.alvarez@cambioclimatico.gob.do<br>Tel: (+809) 472-0537 Ext: 230, (+809) 227-4406 |
| **SECTION BELOW TO BE COMPLETED BY THE UNFCCC SECRETARIAT** | |
| **CDM-PSB ID number:** | |
| **Date when the form was received at UNFCCC secretariat:** | |
| **Have all Parties for which the standardized baseline is applicable fewer than 10 registered CDM project activities as of 31 December 2010? (Y/N):** | |
| **CDM-PSB ID number and version:** *(to be completed by UNFCCC)* | |

# F-CDM-PSB: Section B

**"GRID EMISSION FACTOR FOR THE DOMINICAN REPUBLIC"**

**DD/MM/2013**

**Version 01.0**

| Source |
|---|

If the standardized baseline was developed using a methodological approach contained in an approved methodology or tool please provide the name, number (if applicable) and version of the approved methodology or tool used.

If it was developed using the "*Guidelines for the establishment of sector specific standardized baselines*" please state the version of the guidelines used.

If a table of calculation is available for the development of the standardized baseline, please state the version of the table used, and submit it with this form.

The Standardized Baseline (SBL) was developed using the methodological tool 'Tool to Calculate the Emission Factor for an Electricity System,' Version 03.0.0, CDM EB 70, Annex 22.

The table of calculation is listed under "References and any other Information" section and submitted separately as attachment.

# F-CDM-PSB: Section B

**Type of standardized baseline approach**

The standardized baseline is developed for:

☐ Additionality demonstration;

☐ Baseline identification;

☒ Baseline emission estimation.

Please note that one, two or all three items can be checked.

The development of a standardized baseline for the energy sector is seen as a next important step to scale up mitigation activities. The host country, the Dominican Republic, has therefore decided to establish a standardized baseline for its grid connected power generation sector. The expectation is that this standardized baseline will provide a simpler access to the CDM and encourage the installation of less emitting technologies and fuels for captive power generation.

**Applicability of the standardized baseline**

Please state the host country(ies) or region(s) within a host country to which the 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).

The Dominican Republic

# F-CDM-PSB

**Baseline emission estimation**

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

Version 03.0.0 of the 'Tool to Calculate the Emission Factor for an Electricity System' was followed. The results of the factors for operating and build margins are:

| | |
|---|---|
| Operating Margin (OM) | 0.8223 $tCO_2/MWh$ |
| Build Margin (BM) | 0.4512 $tCO_2/MWh$ |

Therefore, the Combined Margin (CM) is determined as 0.6367 $tCO_2/MWh$ (50 OM:50 BM) or 0.7295 $tCO_2/MWh$ (75 OM:25 BM).

The data vintage for calculating the Grid Emission Factor (GEF) is the most recent 3 years of 2009, 2010, and 2011. The report presenting all the calculation steps, the data used for the calculation, the assumptions, and the outcomes are attached.

# F-CDM-PSB: Section B

**Use of the standardized baseline with an approved methodology**

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

The standardized baseline uses and refers to **the 'Tool to Calculate the Emission Factor for an Electricity System'**

**Validity of the standardized baseline**

Please state the vintage of the parameters used to derive the standardized baseline, in accordance with the requirements contained in the approved methodology or tool.

The data vintage for calculating the GEF is the most recent 3 years; **2009, 2010, and 2011.** Additionally, in accordance with the requirements of the tool, vintages of 2007 and 2008 were used for determination of Low-Cost/Must-Runs.

It is proposed that the standardized baseline shall be valid for **3 years** from the date of adoption, as per Appendix I of the Guidelines for the establishment of sector specific standardized baselines (version 02.0), CDM EB 65 Annex 23.

# F-CDM-PSB: Section B

## REFERENCES AND ANY OTHER INFORMATION

References to the data sources used is available on the attached report.

Attached documents:

- GEF calculation Dominican Republic (spread sheet)
- Grid Emission Factor calculation report (Word document)
- Quality Control (QC) Report Dominican Republic (Word document)
- Data Delivery Protocol Dominican Republic (Word document)

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**History of the document**

| Version | Date | Nature of revision(s) |
|---|---|---|
| 01.0 | 23 March 2012 | Initial publication. |
| **Decision Class**: Regulatory<br>**Document Type**: Form<br>**Business Function**: Methodology | | |

# Quality Control (QC) Report (*)

- Implementation of QC procedure
- Credibility - identify and utilize authoritative data sources
- Accuracy - reduce errors and uncertainties
- Consistency - present all data in the same format and make the datasets compatible with other related data
- Vintage - utilize the most recent data available in a sector
- Completeness - include all relevant activity data and information to produce “true and fair” representative SBs in a sector
- Transparency - disclose sufficient and appropriate data and processes
- Conservativeness - ensure that any deviation from the QA/QC Guidelines that may lead to an overestimation of the baseline emissions in a sector is addressed by taking a conservative approach
- Major issues and uncertainties
- Major corrective actions
- Key findings and plan to improve data quality

(*) Please see Appendix 2 of QA/QC Guidelines
https://cdm.unfccc.int/Reference/Guidclarif/meth/meth_guid46.pdf

## QUALITY CONTROL (QC) REPORT

Draft submission for the Dominican Republic

| | |
|---|---|
| Sector | Energy |
| Name of DNA | Mr. Moisés Alvarez |
| Primary Person Responsible for QC Procedures | Mr. Rafael Berigüete<br>Mr. Moisés Alvarez |
| Contact of the Primary Person Responsible | rberiguete@unphu.edu.do<br>moisesal.c21@gmail.com |
| Implementation Dates of QC Procedures | From the date of adoption of standardized baseline. |

Please describe how your QC procedures were implemented

*All sources for data were given in the monitoring protocol (Section 5 of the attached report) which clearly outlined data type, unit, description, source and frequency.*

*An annual monitoring system was established.*

*All data collected as part of monitoring will be archived electronically and will be maintained for at least 3 years. All these data should be monitored, unless otherwise stated in the methodologies that use by specific projects. Some parameters need to be monitored continuously, or need to be monitored periodically. The data will be archived and maintained in such a way that allow for the reproduction of the calculation of the grid emission factor by a third party.*

*The utility company will keep accurate records of:*

- *Each plant / unit to the grid connected generation:*
  - *Information to clearly identify the plant / unit;*
  - *The start date (commercial);*
  - *The technology and the type of fuel used;*
  - *The net amount of electricity generated in the relevant years;*
  - *The consumption of each fuel type in the relevant years;*
- *Net Calorific and $CO_2$ emission factors used;*
- *Plants included in the build margin and the operating margin.*

*The data will be presented in such a way that allow for the reproduction of the calculation of the emission factor of build margin and operating margin of the network.*

# Quality Control (QC) Report

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| Please specify how the credibility of the data sources was checked. |
| *All data sources were cross referenced. The data used in the calculation were verifiable by third party as they are publicly available on the utility company's website: http://www.oc.org.do/ (Informes -> Memorias). Utility company is the primary source of the data, they were reasonable values, reliable and they are documented in the annual report of the utility company.* |
| Please specify how the accuracy of the data was checked. |
| *Data quality problems, such as relevance, completeness, consistency, credibility, currentness, accuracy etc. are more likely to happen with secondary data sources. In this calculation primary source of data has been used.* |
| Please specify how the consistency was achieved and how the data vintage provision was met. |
| *The most recent three year (2009 – 2011) data at the time of calculation were used.* |

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| *Please specify how the completeness was achieved.* |
| *The methodological tool "Tool to calculate the emission factor for an electricity system" was sufficient and adequate to calculate the CO2 emissions factor for Dominican electric system.* |
| Please specify how the transparency was achieved. |
| *There was sufficient publicly available information to calculate this factor, in an efficient, conservative and transparent manner. The existence of a government agency, Operación del Sistema Eléctrico Nacional Interconectado (http://www.oc.org.do/) that keeps statistics on the operation of the power plants connected to the network ensures transparency.* |
| Please specify major issues and uncertainties identified during the QC procedures. |
| *Not applicable since data collected are from SENI which is the primary source for the data and data used in the calculation are quoted from publicly available annual reports of the utility company.* |
| Please specify major corrective actions taken during the QC procedures. |
| NA |

# Quality Control (QC) Report

| Please justify the conservativeness of the approaches taken during the QC procedures. |
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| *Off grid power plants are not accounted for this calculation. CDM project activities registered by 2011 have also been excluded from the calculation.*<br>*Ref 0175, registered on 20 Oct 2006*<br>*Ref 2595, registered on 09 Apr 2010*<br>*Ref 5456, registered on 28 Nov 2011* |
| Please summarize key findings and present a plan to improve the data quality in the future. |
| *The data and parameters defined in the monitoring protocol, allows keeping the calculation with sufficient rigor and quality. However, the following are being considered to improve data quality in the future:*<br>*• Strengthen the participation of organizations such as the Coordinating Agency, National Commission of Electricity, while updating emission factor, recognizing that it can improve the quality of the necessary information.*<br>*• Prepare a separate study to estimate emissions from off-grid power, recognizing that it is a significant source of emissions. This units not connected to the grid (SENI), can significantly increase the calculated emission factor.* |

*Date to finalize this report*

XX XX 2013

*Signature of DNA*

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Mr. Moisés Alvarez
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# Thank you!

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