

# RWANDA GRID EMISSION FACTOR STANDARDIZED BASELINE

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# OUTLINE

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# Background

- GEF was developed by REMA in collaboration with Perspectives Company but also with a technical assistance from UNFCCC-RCC
- DNA used to interact with CDM-EB
- Started late in 2013 and approved in October 2015

# Procedure for calculation of GEF

- Tool to calculate the emission factor for an electricity system determines the CO<sub>2</sub> emission factor for the displacement of electricity generated by power plants in an electricity system, by calculating the “combined margin” emission factor of the electricity system

# Procedure for calculation of GEF

- DNA identified the relevant electricity systems with collaboration with Rwanda Energy Group Ltd
- Determined the operating margin (OM)
- Calculate the build margin (BM) emission factor
- Calculate the combined margin (CM) emissions factor

# Scope and applicability

- The scope of this standardized baseline covers the grid emission factors for the electricity system of Rwanda derived using the ex ante data vintage option of the “Tool to calculate the emission factor for an electricity system” (version 04.0) based on 2011–2013 data vintage.

# Scope and applicability

- The project activity is implemented in Rwanda and is connected to the project electricity system;
- The CDM approved methodology that is applied to the project activity requires the determination of CO<sub>2</sub> emission factor(s) through the application of the “Tool to calculate the emission factor for an electricity system”

# Scope and applicability

Parameter	Unit	Description	Applicable project types	Applicable values		
				First crediting period	Second crediting period	Third crediting period
$EF_{grid,OM,y}$	tCO <sub>2</sub> /MWh	Operating margin CO <sub>2</sub> emission factor for the project electricity system	All project activities	0.767	0.767	0.767
$EF_{grid,BM,y}$	tCO <sub>2</sub> /MWh	Build margin CO <sub>2</sub> emission factor for the project electricity system	All project activities	0.401	0.401	0.401
$EF_{grid,CM,y}$	tCO <sub>2</sub> /MWh	Combined margin CO <sub>2</sub> emission factor for the project electricity system	Wind and solar power generation project activities	0.676	0.676	0.676
$EF_{grid,CM,y}$	tCO <sub>2</sub> /MWh	Combined margin CO <sub>2</sub> emission factor for the project electricity system	All project activities except wind and solar power generation project activities	0.584	0.493	0.493

**CDM Projects which do not include off-grid power units in the project electricity system**

# Scope and applicability

Parameter	Unit	Description	Applicable project types	Applicable values for first crediting period
$EF_{grid,OM,y}$	tCO <sub>2</sub> /MWh	Operating margin CO <sub>2</sub> emission factor for the project electricity system	All project activities	0.771
$EF_{grid,BM,y}$	tCO <sub>2</sub> /MWh	Build margin CO <sub>2</sub> emission factor for the project electricity system	All project activities	0.438
$EF_{grid,CM,y}$	tCO <sub>2</sub> /MWh	Combined margin CO <sub>2</sub> emission factor for the project electricity system	Wind and solar power generation project activities	0.688
$EF_{grid,CM,y}$	tCO <sub>2</sub> /MWh	Combined margin CO <sub>2</sub> emission factor for the project electricity system	All project activities except wind and solar power generation project activities	0.604

**Projects with inclusion of off-grid power units in the project electricity system**

# Validity

This standardized baseline is valid from 26  
October 2015 to 25 October 2018

# Difficulties

**The process took long especially due to:**

- Limited human capacity within DNA
- Difficulties in data collection/access to data
- The data quality control process and verification by CDM Executive Board

# Way forward

- DNA looks forward to promote the use of GEF in CDM projects but also in other mitigation activities. In this respect we are sensitizing project developers to utilize it

THANK YOU