PHILIP MORRIS INTERNATIONAL

DECLARATION OF CARBON NEUTRALITY

Table of contents

Table of Figures:

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DEMONSTRATION OF CARBON NEUTRALITY
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0 Carbon Neutrality declaration

The **Qualifying Explanatory Statement** (QES) contains all the required information on the carbon neutrality of the given subject. All information provided within this report has been **reviewed by a third party** (SGS) and is believed to be correct. If provided with any information affecting the validity of the following statements, this document will be updated accordingly to reflect the affiliate(s) current status towards carbon neutrality. This report is publicly available on a dedicated website Sustainability resources | PMI, https://www.pmi.com/carbon-neutrality-declaration-kutna-hora

This is the **first declaration** of achievement for **Philip Morris CR a.s. Kutna Hora affiliate**.

Carbon Neutrality of the Scope 1 and 2 emissions under the direct operational control of **Philip Morris CR a.s. Kutna Hora**, manufacturing achieved by **Philip Morris CR a.s** in accordance with PAS2060:2014 at 31st December 2020 with a commitment to maintain to 31st December 2021 for the period commencing 1st January 2020, SGS United Kingdom Limited Certified.

Certification letter from SGS can be found in Annex A.

1 Introduction

This document forms the Qualifying Explanatory Statement (QES) to demonstrate that Philip Morris International (PMI) has achieved **carbon neutrality** for the **Philip Morris CR a.s. Kutna Hora affiliate** manufacturing processes for the period starting 1st January 2020 and ending 31st December 2020, in accordance with PAS 2060:2014.

This has been achieved through:

- **Continuous carbon emissions reduction** through action plans under PMI direct controls: affiliates and fleet under affiliates' control. (These reduction have been captured as part of the GHG inventory for 2020)
- **Compensation of carbon emissions** for the period commencing 1st January 2020 and ending 31st December 2020.

This report includes the information which substantiates the declaration of PMI affiliates achievement of carbon neutrality for first application period (under PAS 2060:2014) and commitment on carbon neutrality up to 2025 (6 years, from 2020 the reference year) in compliance with PAS 2060:2014 standard.

PMI affiliates has also set up a **Carbon Management Plan** to **reduce the GHG emissions associated to the manufacturing processes** in order to demonstrate commitment to being carbon neutral in accordance with PAS 2060:2014 standard.

1.1 General information

PAS 2060 Information requirement	Information as it relates to PMI affiliates
Entities making PAS 2060 declarations	Philip Morris CR a.s. Kutna Hora / Czech Republic
Individual responsible for the evaluation and provision of the data necessary for the substantiation of the declaration (inc. preparing, substantiating, communicating and maintaining the declaration)	Gianluca Capodimonte
Subject of PAS 2060 declaration	The Scope 1 and 2 emissions under the direct operational control of **Philip Morris CR a.s. Kutna Hora** manufacturing - (complete list available in Annex C)
Function of subject	Factory manufacturing conventional products for PMI and its brands.

Activities required for subjects to fulfil its function	The activities required within the manufacturing process are: • Manufacture of Tobacco Related Products; • Cut Filler Processing; • Improved Stem Processing; • Filter Processing; • Machine Cigarette Processing; • Mentholated Inner Liner Processing; • Other Tobacco Products Processing; • Quality Control Laboratory Activitie
Rationale for selection of the subjects	PMI's ambition is to be carbon neutral for all of its direct operations (factories, fleet and offices) by 2025. In this journey, all subjects (factories) that have reached substantial emission reduction in the past years qualify to compensate residual emissions and become carbon neutral.
Type of conformity assessment undertaken	I3P-3 Independent third-party certification - unified
Reference date for PAS 2060 programme	1st of January 2020
Achievement period	1st of January 2020 – 31st of December 2020
Commitment period	1st of January 2021 – 31st of December 2025

Table 1.1 - General information

1.2 Scope

The **subject** for carbon neutrality is the following affiliate:

- **Philip Morris CR a.s. Kutna Hora (Czech Republic)**

The main business activity is the manufacturing of conventional products within PMI brands, as reported in Annex C.

During the reporting period, the definition of the subject(s) remained unchanged. In the case that material change occurs to the subject(s) in the future, the process of determination and substantiation of the subject(s) and associated GHG emissions shall be re-started on the basis of newly defined subject(s).

1.3 Boundaries of the subject

The system boundaries considered for the organizational carbon footprint of the subject are **all the activities** occurring **within the physical perimeter of the affiliate** and **under the affiliate control** including:

- The manufacturing plant
- The office(s) and/or warehouse(s) included within the perimeter
- The fleet under the affiliate's control

GHG emissions associated to affiliate manufacturing process within the defined boundary from the periods of 1st January 2020 to 31st December 2020 have been quantified in accordance with GHG Protocol Corporate Accounting Standard (operational control), and verified by SGS.

The data for this first application period has been **verified by an independent third party**, SGS, who confirms that the Carbon Neutral Declaration set out in this QES is appropriately reported in accordance with the requirement of PAS 2060:2014.

The assurance letter issued by SGS can be found in Annex A.

2 Quantification of carbon footprint

2.1 Emissions results

The total GHG emissions related to scope 1 and 2 refer to manufacturing process during the year 2020 (1st application period) and represent a total of **3,518 tons of CO_2 equivalent**.

GHG scope	GHG emissions [tCO2eq]	Scope contribution
Scope 1 – manufacturing	3,476	98,8%
Scope 1 – fleet	42	1,2%
Scope 2 – Market based	0	0
Total carbon footprint	**3,518**	**100%**

Table 2.1 - GHG emissions overall results

2.2 Methodology

Total GHG emissions associated with PMI affiliate(s), 1st January 2020 to 31st December 2020, have been quantified according to GHG Protocol, Corporate Accounting and Reporting Standard, following the operational control approach. This methodology was chosen as it represents best practice in terms of organization carbon footprint inventory and PAS 2060:2014 endorses it as being fully compliant with its requirements.

The types of greenhouse gases (GHG) included in the Kyoto Protocol to the United Nations Framework Convention on Climate Change are required for reporting under the GHG Protocol Corporate Standard and the below listed were covered in the calculations:

- carbon dioxide (CO2),
- methane (CH4),
- nitrous oxide (N2O).

The inventory accounts for 100% of GHG emissions of business activities and operations in which PMI affiliate(s) has direct operational control and the full authority to introduce and implement its operating policies.

All scope 1 and 2 greenhouse gas emissions relevant to the system boundary are included and quantified, in accordance with the GHG Protocol, Corporate Accounting and Reporting Standard, as confirmed by SGS verification.

2.2.1.1 Scope 1

GHG emissions related to scope 1 come from direct emissions from sources owned or controlled by the affiliate(s). In PMI context, scope 1 emissions are:

- Stationary combustion:
  - Natural gas
  - LPG, Propane and Butane
  - Diesel (fuel oil)
  - Heavy fuel oil
  - Petrol
  - Biomass
- Mobile combustion
  - Petrol
  - Diesel
  - Biodiesel
  - Bioethanol
  - Natural Gas (Compressed)

2.2.1.2 Scope 2

GHG emissions related to scope 2 come from indirect emissions from the generation of purchased electricity, steam, heat and cooling consumed by the affiliate(s). In PMI context, scope 2 emissions are:

- Purchased electricity
- District steam
- District heating (inc. cooling)

2.2.1.3 Scope 3

GHG emissions related to scope 3 refer to all other indirect emissions as a consequence of the activities of the affiliate(s) that occur from sources not owned or controlled by the PMI affiliate are out of scope.

2.3 Data sources

Primary and secondary data has been used for the Carbon Quantification process. Primary data is used where possible, only where primary data was not, secondary data was used to quantify emission. For scope 1 and 2, **primary data were exclusively used**, with the exception of the calculation of emissions from fleet where secondary data was used.

Fuel consumption and emissions have been determined by using the PMI available data for Fleet in the respective market. Taking the average fuel consumption per car, this value has been multiplied by the number of benefits car in the factory. The total fuel consumption is then multiplied using DEFRA coefficient to determine the emissions

1. Primary Data source related to all inputs and outputs corresponding to steps under the affiliates control were directly provided. This includes measured energy inputs for production.

2. Emission Factors were sourced from recognized databases (DEFRA and GHG protocol).

Data sources (e.g. invoices) were reviewed by SGS through the inventory verification , and certification against PAS 2060:2014 processes.

2.4 Assumptions and estimations

All assumptions made to quantify the Greenhouse gas emission of PMI affiliates were reviewed by SGS through the GHG inventory verification process. For scope 1 and 2, no assumptions were made.

For fleet, fuel consumption and emissions have been determined by using the PMI available data for Fleet in the respective market. Taking the average fuel consumption per car, this value has been multiplied by the number of benefits car in the factory. The total fuel consumption is then multiplied using DEFRA coefficient to determine the emissions.

2.5 Exclusions

Annex C outlines all the inclusions and exclusions for GHG emissions; in order to ensure the coverage of any potential exclusions within the system boundary an additional 3% has been added to affiliate total Carbon Footprint to ensure the Carbon Neutrality program covers 100% of the GHG emissions.

2.6 Uncertainties

Generally, the use of secondary data throughout the assessment represents the major source of uncertainties on results. Actions taken to minimize these uncertainties are described below and were reviewed by SGS.

- Secondary emissions factors: uncertainty associated to the use of secondary emission factors is because they represent averages, rather than specific emissions. However, their use was appropriate, and care has been taken to use the best available datasets (DEFRA and GHG Protocol).
- Secondary data has been used only for fleet emissions calculation.

Result of the uncertainty calculation is reported in Annex D.

2.7 Comparison with baseline period results

This section will be completed in subsequent years as 2020 is the first PAS 2060:2014 certification, therefore will be used as baseline period subsequently.

3 Carbon Management Plan

The carbon reduction management plan will consider a 6 years period (2020-2025) with the aim of maintaining the emissions down, this means that the emission indicator must not increase along the period.
This target will be monitored periodically (annually) in order to check if the expected results are aligned to the real ones. In order to achieve the target a series of project will be implemented.
Although PMI affiliates began its Carbon Management Programme for Carbon Neutrality in 2020, energy saving measures have been implementing since 2010 within the production plants (i.e. Klaipeda (Lithuania) PMPSA (Switzerland), Tabaqueria (Portugal)). Others started later and will be considered in the boundaries of this study.
The following paragraphs explain in detail implemented (paragraph 3.2) and planned (paragraph 3.3) projects, that are mainly related to production plant GHG emissions reductions.

3.1 PMI best practice

In 2020, 25 out of 42 affiliates, 100% of electricity purchased came from renewable sources (electricity source for the affiliates in the carbon neutral factory certification are provided in annex F). Since 2017, we are gradually increasing the uptake of green electricity (as showed in below table) to reach 100% green electricity purchased for all our affiliates by 2025. By investing in renewable energy electricity, PMI overall avoided the emissions of **over 1 million ton of CO_2 equivalent**.

Indicator	2017	2018	2019	2020	Total Value
CO2 Scope 2 (GHG emissions) - Manufacturing - Market based [t GHG]	*217,563.41*	*149,756.70*	*111,507.79*	*65,288.69*	*544,116.60*
CO2 Scope 2 (GHG emissions) - Manufacturing - Location based [t GHG]	*414,126.07*	*395,371.30*	*398,331.67*	*357,670.25*	*1,565,499.29*
Cumulative difference between location based and market based	*196,562.66*	*245,614.60*	*286,823.88*	*292,381.56*	***1,021,382.69***

Table 3.1 - Green electricity increase

3.2 Implemented GHG emissions reduction project repository

At PMI, emissions reduction project governance and budget approval comes from two distinctive main streams; one driven from central functions and another by the local team. Table 3.2 shows project implemented in the last few years, evaluated in 2020 Carbon Footprint assessment.

Project name	Description	Year	Type of energy used	Emission reduction [kg CO2 eq]
Chillers Heat Recovery (Heat Pump)	Heat recovery syste, based on Heat pump.Heat is used for HVAC heating. Saving is based on COP - high efficient heat generation.	**2011**	Fuel - Natural Gas	**136 092**
Air compressors heat recovery stage 1	Heat recovery from water cooled air compressors (water-to-air). Heat is used for preheating of fresh air inside AHU units.	**2011**	Fuel - Natural Gas	**79 444**
Heat Recovery from Dust Filters Bld.8	Heat recovery from dust collection (air-to-air). Heat used for preheating of fresh air inside AHU units.	**2014**	Fuel - Natural Gas	**43 176**
FTD sleeping mode	Installation of improved control software for FTD (low consumption mode).	**2014**	Fuel - Natural Gas	**44 558**
Adiabatic humidification Secondary	Installation of adiabatic humidification in Secondary HVAC instead of steam humidification.	**2016**	Fuel - Natural Gas	**234 879**

Boiler K2 Condensing Heat Exchanger Ventos	Installation of additional heat exchanger (fume gas - to - water, condensing) on steam boiler in boilerhouse.	**2017**	Fuel - Natural Gas	**103 623**
CA compressors heat recovery	Heat pump (water-to-water) for heat recovery from water cooled air compressors to HVAC heating system.	**2018**	Fuel - Natural Gas	**69 082**
Reverse Osmosis	Installation of reverse osmosis for boiler feeding water preparation in boilerhouse.	**2019**	Fuel - Natural Gas	**34 541**

Table 3.2 - Implemented GHG emissions reduction projects

3.3 Planned GHG emissions reduction initiatives

In order to achieve the above-mentioned target, PMI is committed to identifying and implementing carbon saving projects until 31/12/2025. Table 3.3 shows main initiatives identified and estimated reduction for the whole commitment period (2021-2025).

Initiative name	Description	Year planned	Type of energy used	Energy reduction (GJ)	Estimated reduction [kg CO2eq]
ESI wave 2: Heat recovery - precooler for Economizer feed water	Installlation of heat exchanger (water-to-water) to decrease water temperature before boiler economizer, improving efficiency.	2021	Fuel - Natural Gas	1 785	**101 000**
ESI wave 2: Chillers - chilled water	Remote control of chiller plant with help of	2021	Electricity	387	0 (green electricity)

system optimizer	optimizer. Improvement of efficiency.				
ESI wave 2: AHU flow rate optimization	Replacement of belt driven fans in HVAC air handling units with EC fans. Improvement of fan efficiency.	2022	Electricity	to be calculated	0 (green electricity)
ESI wave 2: Individual CA meter per secondary machines	Installation of individual compressed air consumption meters per linkup. Evaluation of individual KPIs and follow up actions.	2022	Electricity	to be calculated	0 (green electricity)
HVAC Air Bypass	Modification of AHU equipment in Secondary HVAC.	2022	Electricity	1 011	0 (green electricity)
ESI wave 3 2022-2025	New potential projects focused on energy saving (electricity, natural gas).	2022-2025	Electricity + Fuel	to be calculated	to be calculated

Table 3.3 - Planned GHG emissions reduction initiatives

Actual emsisions reductions will be measured in terms of intensity metrics relating to production output.

4 Carbon offset program

4.1 Offset program for the first application period

PMI has an offsetting program in place to support the carbon neutrality, based on quality criteria aligned with the most rigorous international standards and targeting social and economic benefits.
Through collaborating with *myclimate* (an internationally recognized stakeholder in carbon neutral strategies), PMI has invested into an offsetting project "Clean Drinking Water for Schools and Households in Uganda" that have been used to compensate outstanding emissions in this declaration of carbon neutrality.
Carbon neutrality is achieved by reducing and compensating Greenhouse Gases (GHG) emissions through supporting the development of sustainable climate solutions in developing countries. Compensation projects bring social, environmental and economic benefits, which contribute to United Nations Sustainable Development Goals (SDGs) and are labelled by independent carbon standards such such as **Verified Carbon Standard (VCS)**[1] , **Climate Community and Biodiversity Alliance (CCBA)**[2]**, Gold Standard**[3]**, and other offsets as endorsed in PAS2060**.

Credits were retired on 18th November 2021

These credits are supported by publicly available project documentation on the GSF Registry (goldstandard.org)[4]). The registry system is the central storehouse of data on all registered projects, and tracks the generation, retirement and cancellation of all credits. To register with the program, projects must show that they have met all standards and methodological requirements.

4.2 Offsetting project(s)

Offsetting projects selected by Philip Morris CR a.s. are:

"Clean Drinking Water for Schools and Households in Uganda"
Impact Carbon and myclimate Safe Water and Improved Cookstoves Global PoA - Uganda VPA

[1] https://verra.org/

[2] http://www.climate-standards.org/

[3] https://www.goldstandard.org/

[4] https://registry.goldstandard.org/projects?q=&page=1

4.3 Amount of credits purchased

Credits have been ordered by PMI for the period covering 1st of January 2020 – 31st December 2020.
The amount of credits purchased is 3,624 tonnes of CO_2 equivalent, it is composed by two contributions:

- **3,518 tonnes of CO_2 equivalent**, amount evaluated for the first application period
- **106 tonnes of CO_2 equivalent**, that represent the overrate of 3% of the whole baseline carbon footprint to cover all the exclusions (Annex C) and precludes underestimation.

We can reasonably assume that PMI Factory Carbon Neutral covers 100% of the GHG emissions.

PMI portfolio offsetting credits is composed of:

Project: Clean Drinking Water for Schools and Households in Uganda
Impact Carbon and myclimate Safe Water and Improved Cookstoves Global PoA - Uganda VPA – 100%

The Gold Standard guarantee that the offsets **generated represent genuine, additional GHG** emission reductions. The projects are technically designed so as to enable the quantification of a specific number of emissions reductions/removals the carbon credits expected from each farm/forest. The Gold Standard label also guarantee that the project involved in delivering credits meet the criteria of additionality, permanence, leakage and double counting.

It also guarantee that the units were verified by an independent thid-partyand that the credits were only issued after the emission reduction has taken place.

Originating Project Name: Impact Carbon and myclimate Safe Water and Improved Cookstoves Global PoA - Uganda VPA
Vintage Year: 2019
Quantity of retired GS VER credits: 3624
Serial Number: GS1-1-UG-GS2296-16-2019-21070-41978-45601
Retirement Date: 18 November 2021
Project ID: GS2296
Project type: Energy Efficiency - Domestic
Country: Uganda

Retired on behalf of Philip Morris CR a.s., for offsetting unavoidable emissions, year 2020.

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Urkunde
Attestation
Attestato
Confirmation

myclimate
shape our future

Klimaschutz
Protection climatique
Protezione del clima
Climate protection

The Swiss climate protection organisation myclimate confirms that

Philip Morris CR a.s.

has made a sustainable contribution to voluntary climate protection
by offsetting the following quantity of CO_2 in the high quality myclimate
carbon offset project «7192-A-R - Clean Drinking Water for Schools and Households in Uganda»

Quantity CO_2:

3'624.00 t

Carbon Credits 2021
for carbon neutral production plants

Zurich, 18. November 2021

Stephen Neff
CEO myclimate

Confirmation number: 252661-2

myclimate is registered under Swiss Federal Law as a non-profit,
tax exempt foundation that promotes climate protection.
Date of issue: 5. July 2011, File number: 11 10 312

Climate
Positive Action for Planet + People

We are delighted to confirm the retirement of
3624 Verified Emission Reductions (VERs)
for
myclimate Foundation
on 18/11/2021

Impact Carbon and myclimate Safe Water and Improved Cookstoves Global PoA - Uganda VPA
Philip Morris International Services LLC / Philipp Morris - Philip Morris CR a.s

These credits have been retired, saving 3624 tonnes of CO2 emissions
from being released into the atmosphere.
Thank you for investing in a safer climate and more sustainable world.

Gold Standard

Retirement certificates are hosted on the Gold Standard Impact Registry. view your certificate.

Gold Standard | Chemin de Balexert 7-9 1219 Châtelaine International Environment House 2, Switzerland goldstandard.org +41 22 788 70 80, help@goldstandard.org

4.4 Compensation program for the second application period

For the second application period, PMI will cancel the volume of carbon credits required once the emission calculations are completed for this period.The volumes of credits required by PMI affiliates (increasing in number until 2025) will be confirmed at later stage upon completion of the greenhouse gas inventory audit for this Application Period. The portfolio composition and share among projects will be determined based on the volume of credits

5 Annex A – Carbon Neutral Assurance letter

SGS

Verification Statement Number:
CCP278808/22/11/2021

The Carbon Neutrality Declaration as presented in its Qualifying Explanatory Statement (QES), for the application period 01/01/2020 – 31/12/2020 of:

Philip Morris CR a.s.
Vitezna 1,
284 03 Kutna Hora
Czech Republic

has been verified by SGS United Kingdom Limited as conforming to the requirements of PAS 2060:2014: Specification for the demonstration of carbon neutrality (PAS 2060).

Lead Assessor: Lisa Gibson
Technical Reviewer: Paulomi Raythatha

Authorised by:

Pamela Chadwick

Business Manager
SGS United Kingdom Ltd

Verification Statement Date: 22nd November 2021

This Statement is not valid without the full verification scope, objectives, criteria and conclusion available on pages 2 to 3 of this Statement

6 Annex B – Qualifying Explanatory Statements (QES) checklist

EHS.D.410.F02%20QES%20Check%20List%2

7 Annex C – Scope 1, 2 and 3 emissions inclusion and exclusion

Included and excluded emission sources related to the subject(s) are presented below, together with explanation for exclusions.

Scope	Emission source	Description	Inclusion exclusion	Justification of Exclusion
1.1	Stationary combustion	Combustion of fuels in boilers and furnaces for the generation of heat and steam, used for production processes and heating of buildings	Included	-
1.2	Mobile combustion sources	Transportation of employees and goods with cars under affiliate control.	Included	-
1.3	Process emissions	Emissions occurring during the production process (DIET)	Included	-
1.4	Fugitive emissions	Refrigerant gases losses	Excluded	Identified as below materiality threshold within the GHG inventory
2.1	Electricity consumption	Generation of purchased electricity	Included	-
2.2	Heat, steam and/or cold consumption	Purchase of heat, steam or cold energy not produced at operation site.	Included	-
3	Scope 3	All other indirect emissions	Excluded	Out of scope

Table 7.1 - Inclusions and exclusions

8 Annex D – Uncertainty calculation

8.1 Uncertainty calculation

Uncertainties around the quantification of the carbon footprint have been assessed throughout the assessment following the guidelines released by ISO and available in the “GHG Protocol’s Measurement and Estimation Uncertainty of GHG Emissions tool” (supporting worksheet file “Uncertainty_Calculation_Tool”)[5]; since the uncertainties are not known for all the parameters (activity data and emission factors), the IPCC Guideline for National Greenhouse Inventories Reporting Instructions (1996) was used:

- Activity data: 7%
- Emission factor: 7%

All information can be accessed in the below file attached:

GHG Uncertainty Czech Republic.xlsx

Outcome of the uncertainty calculation (from attached file)

	Step 1+2						Step 3					
	A	B	C	D	E	F	G	H	I	J	K	L
	Activity Data (e.g. Quantity of fuel used)	Unit used to measure Activity Data	Uncertainty of activity data (a) (Confidence interval expressed in ± percent)	GHG emission factor	Unit of GHG emission factor (for kg CO2!)	Uncertainty of emission factor (Confidence interval expressed in ± percent)	CO2 emissions in kg	CO_2 emissions in metric tonnes	Uncertainty of calculated emissions	Certainty Ranking	Auxiliary Variable 1	Auxiliary Variable 2
							A * D	G/1000	$I=\sqrt{C^2+F^2}$		(H*I)	K^2
Example: Source 1	1000,00	GJ	+/- 5,0%	56,10	kg CO2 / GJ	+/- 10,0%	56.100,00	56,10	+/- 11,2%	Good	6,27	39,34
Source description												
Natural gas	60276041,00	MJ	+/- 7,0%	0,06	kg CO2 / MJ	+/- 7,0%	3.411.623,92	3.411,62	+/- 9,9%	Good	337,73	114.063,94
LPG / Propoane / butane	0,00	MJ	+/- 7,0%	0,06	kg CO2 / MJ	+/- 7,0%	0,00	0,00	+/- 9,9%	Good	0,00	0,00
Diesel or Fuel oil	0,00	MJ	+/- 7,0%	0,07	kg CO2 / MJ	+/- 7,0%	0,00	0,00	+/- 9,9%	Good	0,00	0,00
Biomass	0,00	MJ	+/- 7,0%	0,10	kg CO2 / MJ	+/- 7,0%	0,00	0,00	+/- 9,9%	Good	0,00	0,00
Diesel	0,00	L	+/- 7,0%	2,69	kg CO2 / L	+/- 7,0%	0,00	0,00	+/- 9,9%	Good	0,00	0,00
Biodiesel	0,00	L	+/- 7,0%	0,17	kg CO2 / L	+/- 7,0%	0,00	0,00	+/- 9,9%	Good	0,00	0,00
Bioethanol	0,00	L	+/- 7,0%	0,01	kg CO2 / L	+/- 7,0%	0,00	0,00	+/- 9,9%	Good	0,00	0,00
Natural gas	0,00	L	+/- 7,0%	1,15	kg CO2 / L	+/- 7,0%	0,00	0,00	+/- 9,9%	Good	0,00	0,00
Petrol	0,00	L	+/- 7,0%	2,31	kg CO2 / L	+/- 7,0%	0,00	0,00	+/- 9,9%	Good	0,00	0,00
Electricity - Market based	25076489,00	kWh	+/- 7,0%	0,00	kg CO2 / kWh	+/- 7,0%	0,00	0,00	+/- 9,9%	Good	0,00	0,00
Fleet Fuel Diesel	15600,00	L	+/- 7,0%	2,68	kg CO2 / L	+/- 7,0%	41.808,00	41,81	+/- 9,9%	Good	4,14	17,13
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00
							0,00	0,00	+/- 0,0%	High	0,00	0,00

Note: For individual uncertainties greater than 60%, the results of the tool are not valid

Sum CO_2 emissions (M):	3.453.431,92	3.453,43		Aggregated Certainty Ranking
Step 4: Cumulated Uncertainty: $\pm u = \pm \frac{\sqrt{\sum_{i=1}^{n}(H_i * I_i)^2}}{M}$			+/- 9,8%	Good

Table 8.1 - Uncertainty calculations

[5] https://ghgprotocol.org/calculation-tools

Uncertainties due to emission Factors and Activity Data				
1	2	3	4	5
Gas	**Source category**	**Emission factor**	**Activity data**	**Overall uncertainty**
CO_2	Energy	7%	7%	10%
CO_2	Industrial Processes	7%	7%	10%
CO_2	Land Use Change and Forrestry	33%	50%	60%
CH_4	Biomass Burning	50%	50%	100%
CH_4	Oil and Nat. Gas Activities	55%	20%	60%
CH_4	Rice cultivation	3/4	1/4	1
CH_4	Waste	2/3	1/3	1
CH_4	Animals	25%	10%	20%
CH_4	Animal waste	20%	10%	20%
N_20	Industrial Processes	35%	35%	50%
N_20	Agricultural Soils			2 orders of magnitude
N_20	Biomass Burning			100%
Note: Individual uncertainties that appear to be greater than ± 60% are not shown. Instead judgement as to the relative importance of emissions factor and activity data uncertainties are shown as fractions which sum to one				

Source:
Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories: Reporting Instructions

Table 8.2 - IPCC uncertainty data

9 Annex E – Voluntary offset program

The primary objective of the programme is to disseminate water purification systems to low-income households and institutions such as schools, starting in Uganda. Carbon finance is used to give households access to the clean water technologies thereby improving the livelihoods and health conditions of thousands of people and at the same time reducing CO_2 emissions by reducing the consumption of non-renewable firewood and charcoal.

In this annex, specific project sheet concerning the chosen offsetting projects are presented.

Clean_Drinking_Wate
r_for_Schools_and_Hc

All the relevant project documentations can be found at the following link:

https://www.myclimate.org/information/carbon-offset-projects/detail-carbon-offset-projects/uganda-water-7192/

10 Annex F – Renewable Energy Certificates

10.1 Kutna Hora

Cancellation Statement_Philip Mor

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