JOINT PROJECT DESIGN AND MONITORING REPORT

AVOIDED EMISSIONS FROM {YYYY} CIRCULARITY ACTIVITIES

{SPONSOR NAME}, {YYYY}

Table of Contents

1. EXECUTIVE SUMMARY 2

2. PROJECT DETAILS 2

2.1 Project Description 2
2.2 Project Proponent 2
2.3 Project Monitoring period 2
2.4 Double Counting and Participation Under Other GHG Programs 2
2.5 Double Claiming 3

3. APPLICATION OF METHODOLOGY 3

3.1 Title and Reference of Methodology Used 3
3.2 Applicability of Methodology 3
3.3 Project Boundary 4
3.4 Baseline Scenario 4
3.5 Methodology Deviations 4

4. QUANTIFICATION OF ACHIEVED GHG EMISSIONS REDUCTIONS AND REMOVALS 5

4.1 Baseline Emissions 5
4.2 General Baseline Emissions Methodology 5
4.3 Project Emissions 7
4.4 Leakage Emissions 10
4.5 Achieved GHG Emissions Avoided and CO_2e Removals 10

5 MONITORING 10

5.1 Data and parameters Available at Validation 10
5.2 Data and Parameters Monitored 11
5.3 Monitoring Plan 12
5.3.1 Monitoring institution 13
5.3.2 Data to be Monitored 13
5.3.3 Equipment for monitoring 13

6 APPENDICES 14

Appendix 1 – Calculated Emissions Factors for Processes at XX Facilities and Third Parties 14
1.1 {Facility 1} 14
1.2 {Facility X...} 14
Appendix 2 – Emissions Factors for Electricity and Fossil Fuels used in Recycling and Refurbishing Processes 14
Appendix 3 - Emissions Factors per Asset and Material for Baseline Calculations 15
Appendix 4 – Avoided Emissions Summary of Calculation per Commodity – Recycling 15
Appendix 5 – Avoided Emissions Summary of Calculation per Commodity – Refurbishing 16

1. Executive summary

This document serves as a Joint Project Design and Monitoring Report (PD/MR) for the project activity conducted by {ENTITY} during the {YYYY} monitoring period. This document outlines the design of the circularity project, the application of the approved methodology, and the verified monitoring results for avoided GHG emissions.

{Add description of ENTITY activities including number of facilities, their names and location}

2. Project Details

2.1 Project Description

{ENTITY}'s circular activities generate avoided GHG emissions by recovering assets and materials from certain e-waste or other waste commodities or products, reducing reliance on virgin material production. Recovering these materials and assets from electronic waste has lower emissions compared to the baseline scenarios, which would be to source these materials from virgin materials.

In the absence of this project, electronic waste is likely to be disposed of in landfills or processed through informal, low-efficiency systems. This increases the reliance on virgin material production, which is more emissions-intensive due to the high energy consumption associated with extraction, processing, and manufacturing activities.

Based on the quantity of materials recycled, assets refurbished or new products produced, the project achieved xx tonnes of $CO2_e$ of avoided emissions in {YYYY}.

2.2 Project Proponent

Organization name	{ENTITY NAME}
Contact person	{CONTACT NAME}
Title	{ CONTACT TITLE}
Email	{ CONTACT EMAIL}

2.3 Project Monitoring period

Monitoring period	{YYYY}
Start and end date of first or fixed monitoring period	1 January {YYYY} – 31 December {YYYY}

2.4 Double Counting and Participation Under Other GHG Programs

Is project receiving/seeking credit under another program?	☐ Yes ☐ No

2.5 Double Claiming

Is there any double claiming with emissions trading programs?	☐ Yes ☐ No
Is there any double claiming through other kinds of carbon credits?	☐ Yes ☐ No
Are there contracts in place with suppliers to ensure no double claiming? If yes, please provide additional documentation in the appendix.	☐ Yes ☐ No

3. Application of Methodology

3.1 Title and Reference of Methodology Used

Type (methodology, tool or module)	Title	Version
Methodology	Estimated Avoided Emissions from Recycling Activities	V1 2024

3.2 Applicability of Methodology

Methodology	Applicability Condition	Justification of Compliance
Estimated Avoided Emissions from Recycling Activities	The recycling and/or refurbishing facilities include waste sorting and processing of materials recovered.	{Description of how {ENTITY} complies with applicability condition.}
	It is possible to measure and record the final output of the recycling/refurbishing facilities (by weight).	{Description of how {ENTITY} complies with applicability condition.}
	Electricity and fossil fuel consumption by recycling/refurbishing activities can be measured and recorded.	{Description of how {ENTITY} complies with applicability condition.}
	Output materials, components, and/or products are sold to manufacturing facilities or intermediary processors with traceable downstream use.	{Description of how {ENTITY} complies with applicability condition.}
	Emission reductions accrue to only one actor in the value chain (e.g., recycler, refurbisher, or processor).	{Description of how {ENTITY} complies with applicability condition.}
	Recycled/refurbished materials have properties comparable to virgin materials (metals, plastics, electronics).	{Description of how {ENTITY} complies with applicability condition.}

	Only materials, components and/or assets that meet conditions in Appendix 3 of the methodology are included in emissions calculations.	{Description of how {ENTITY} complies with applicability condition.}

3.3 Project Boundary

The project boundary encompasses the process energy associated with recycling and refurbishing assets, excluding emissions from upstream activities like transportation and waste collection, as well as downstream activities. It includes the assets processed by {ENTITY}, the specific recycling and refurbishing processes applied, and the recovery of materials that offset virgin material production, in line with the methodology outlined in Chapter 3.1.

Commodities collected by {ENTITY} (e.g., {ENTITY} examples) are categorized, processed internally, or forwarded to third-party facilities for smelting to recover raw materials. Many assets are fully recovered for reuse.

3.4 Baseline Scenario

The baseline scenario represents the alternative scenario in the absence of the project. For material and asset recovery from waste, this alternative assumes the following:

- **Recycling baseline:** in the absence of {ENTITY}'s recycling processes, it is assumed that materials from waste are not recovered and therefore must be sourced from virgin materials to meet demand. In many cases, waste is either disposed of in landfills or processed through informal or low-efficiency systems, limiting the recovery rates and thus increasing the reliance on primary material extraction.

- **Refurbishing baseline:** In the absence of {ENTITY}'s refurbishing activities, waste is discarded, and demand for new assets is met through the production of new components and equipment using virgin materials. This leads to higher emissions from both increased operational energy consumption in making new assets, and the extraction, processing, and manufacturing of materials.

3.5 Methodology Deviations

Methodology	Deviation	Justification

Estimated Avoided Emissions from Recycling Activities	{List out any deviations to the methodology, if applicable}	{Justification for deviation to the methodology, if applicable}

4. Quantification of Achieved GHG Emissions Reductions and Removals

4.1 Baseline Emissions

In this section, the methodology used to calculate the baseline emissions associated with {ENTITY}'s recycling and refurbishing processes are outlined. As described in Section 3.4, the baseline emissions represent the emissions that would occur in the absence of {ENTITY}'s processes. The baseline emissions factors are calculated using Equations 1 – 3 below. In the below steps, the methodology used to quantify baseline emissions are presented.

4.2 General Baseline Emissions Methodology

The overall baseline emissions are quantified using the following general formula (Equation 1), which breaks down emissions into two key components: the baseline emissions for raw materials recovered during recycling processes, and the baseline emissions for assets ready for reuse based on the refurbishing processes:

Equation 1: Total baseline emissions

$$\mathrm{BE_y} = \mathrm{BE_{rc,y}} + \mathrm{BE_{ru,y}}$$

Where:
BE_y = Total baseline emissions in year y
$BE_{rc,y}$ = Baseline emissions for materials or assets recycled
$BE_{,ru,y}$ = Baseline emissions for materials or assets reused

In the table below the total baseline emissions during the monitoring period are presented:

Monitoring Period	Facility	Total Baseline Emissions During Monitoring Period	Baseline Emissions From Recycling During Monitoring Period	Baseline Emissions From Refurbishing During Monitoring Period
		tCO_2e	tCO_2e	tCO_2e
1 January {YYYY} – 31	{Facility 1}			
	{Facility 2}			
	{Facility ...}			

December {YYYY}	**Total**			

4.2.1 Baseline emissions for recycling

Equation 2 below describes how baseline emissions are calculated for raw materials recovered from recycling. As shown, the emissions for the manufacture of each raw material from primary sources is calculated using a material-specific emissions factor:

Equation 2: Baseline emissions from recycling

$$BE_{rc,y} = \sum_{i} Q_{i,rc,y} \times SE_{i,y}$$

Where:

$BE_{rc,y}$ = Baseline emissions for materials or components recycled

$Q_{rc,i}$ = Quantity of material or component i recycled in year y

$SE_{,i}$ = Specific CO_2e emissions factor for production of material or component i measured in tCO_2e/tonne in year y

In the below table, the list of materials recovered from recycling, the quantity recovered, the material-specific emissions factors, and baseline emissions for each material are presented, each facility. Due to rounding, not all values may add up. For conservative estimation, baseline emissions have been rounded down to the nearest integer.

For further details on how these materials were recovered, please refer to Appendix 4.

Recovered Material i During Monitoring Period	Specific CO_2e Emissions Factor $SE_{,i}$[1]	Quantity Recovered During Monitoring Period	Baseline Emissions During Monitoring Period	Quantity Recovered During Monitoring Period	Baseline Emissions During Monitoring Period	Total Baseline Emissions During Monitoring Period
		{Facility 1}		**{Facility ...}**		
	tCO_2e/metric tonne	metric tonnes	tCO_2e	metric tonnes	tCO_2e	tCO_2e
{Material 1}						
{Material 1}						
{Material ...}						
Total						

4.2.2 Baseline emissions for refurbishing

Equation 3 below is used to calculate the emissions for primary assets. Unlike the recycling process, these assets are collected from e-waste products (or equivalent products from another sector) and refurbished. The baseline emissions represent the emissions required to produce the assets from virgin materials.

[1] For sources for baseline materials emissions factors please refer to Appendix 3.

Equation 3: Baseline emissions from refurbishing

$$BE_{ru,y} = \sum_{i} Q_{i,ru,y} \times SE_{i,y}$$

Where:

$BE_{ru,y}$ = Baseline emissions for materials or components refurbished

$Q_{i,ru,y}$ = Quantity of material or component i refurbished in year y

$SE_{,i}$ = Specific CO_2e emissions factor for production of material or component i measured in tCO_2e/tonne in year y

In the below table, the list of assets refurbished by {ENTITY} is presented including the quantities refurbished, the emissions factors for manufacturing and the baseline emissions during the monitoring period for the {facility/facilities}. Due to rounding, not all values may add up. For conservative estimation, baseline emissions have been rounded down to the nearest integer.

For further details on how these materials were recovered, please refer to Appendix 5.

Refurbished Asset i During Monitoring Period	Specific CO_2e Emissions Factor $SE_{,i}$[2]	Quantity Recovered During Monitoring Period	Baseline Emissions During Monitoring Period	Quantity Recovered During Monitoring Period	Baseline Emissions During Monitoring Period	Total Baseline Emissions During Monitoring Period
		{Facility 1}		**{Facility ...}**		
	tCO_2e/metric tonne	metric tonnes	tCO_2e	metric tonnes	tCO_2e	tCO_2e
{Asset 1}						
{Asset 2}						
{Asset ...}						
Total						

4.3 Project Emissions

The methodology for calculating the project emissions associated with {ENTITY}'s processes is outlined below. As detailed in Section 3.3, the project boundaries are confined to the processes involved in recycling of waste materials and/or the refurbishing of waste products (i.e., electronic waste) into raw materials, secondary assets and refurbished assets. Project emissions are primarily generated during energy-intensive activities such as sorting, distmantling, shredding, and smelting of waste to recover materials. These emissions are quantified using Equations 4–6, as presented below. The subsequent steps provide an explanation of the emission quantification process.

4.3.1 General project emissions methodology

[2] For sources for baseline asset emissions factors please refer to Appendix 3.

The overall project emissions are quantified using the following general formula (Equation 4), which breaks down emissions into two key components: the project emissions for recovery of raw materials from recycling, and the project emissions associated with the refurbishing of electronic assets fit for reuse:

Equation 4: Total project emissions

$$\mathrm{PE_y} = \mathrm{PE_{rc,y}} + \mathrm{PE_{ru,y}}$$

Where:

PE_y = Total project emissions in year y

$PE_{rc,y}$ = Total project emissions for materials or components recycled

$PE_{,ru,y}$ = Total project emissions for materials or components reused

In the table below the total project emissions during the monitoring period are presented:

Monitoring Period	Facility	Total Project Emissions During Monitoring Period	Project Emissions From Recycling During Monitoring Period	Project Emissions From Refurbishing During Monitoring Period
		tCO_2e	tCO_2e	tCO_2e
1 January {YYYY} – 31 December {YYYY}	{Facility 1}			
	{Facility ...}			
	Total			

4.3.2 Project emissions from recycling

Equation 5 below outlines the calculation of project emissions associated with raw materials recovered from recycling. These emissions are determined based on the specific processes involved for each material, using a process-specific emissions factor. This factor is calculated based on the energy consumed per unit of material processed. Given that the processes handle a variety of asset types, the emissions factors are derived from the total energy consumption, the types of fuel used, and the total quantity of material processed. It is assumed that energy consumption per tonne is consistent across all asset types, resulting in an average emissions factor expressed as tCO_2e per tonne.

Equation 5: Project emissions from recycling

$$\mathrm{PE_{rc,y}} = \sum_{\mathrm{i}} \mathrm{Q_{i,rc,y}} \times \left[\sum_{\mathrm{p}} \mathrm{EC_{p,i,y}} \times \mathrm{SE_p}\right]$$

$Q_{,i,rc,y}$ = Quantity of asset i recycled in year y

p = Process p (e.g. dismantling, shredding, or smelting)

$EC_{p,I,y}$ = Energy consumed in process p for processing electrical and electronic equipment i in year y ($MWh/tonne_i$)

SE_p = Emissions factor for process p based on the fuel type used

The tables below present the list of assets recycled, the quantity of the assets recovered, and resulting emissions associated with the recovery of materials specified in Chapter 4.2.1, rounded up to the nearest integer. A list of process-specific emissions factors is provided in Appendix 1[3].

Asset Recycled i During Monitoring Period	Quantity Recycled During Monitoring Period	Project Emissions During Monitoring Period	Quantity Recycled During Monitoring Period	Project Emissions During Monitoring Period	Quantity Recycled During Monitoring Period	Project Emissions During Monitoring Period
	{Facility 1}		{Facility ...}		Total	
	metric tonnes	tCO_2e	metric tonnes	tCO_2e	metric tonnes	tCO_2e
{Asset 1}						
{Asset 2}						
{Asset ...}						
Total						

4.3.3 Project emissions from refurbishing

Equation 6 below is used to calculate the project emissions associated with the refurbishment of assets for reuse. Unlike recycling, refurbishing involves restoring assets recovered from e-waste (or another product category) to a functional, usable state. The project emissions for this activity are calculated based on the energy consumption of the processes required to refurbish the materials.

Equation 6: Project emissions from refurbishing

$$PE_{ru,y} = \sum_{i} Q_{i,ru,y} \times \left[\sum_{p} EC_{p,i,y} \times SE_{p} \right]$$

$Q_{i,ru,y}$ = Quantity of material or component i reused in year
p = Process p (e.g. dismantling, shredding, or smelting)
$EC_{p,I,y}$ = Energy consumed in process p for processing electrical and electronic equipment i ($MWh/tonne_i$)
SE_p = Emissions factor for process p based on the fuel type used

Similar to Equation 5, the process-specific emissions factors are calculated based on total energy consumption, fuel types, and the total quantity of materials processed. The table below provides a summary of the assets refurbished by {ENTITY}, including the quantity refurbished, and the resulting project emissions over the monitoring period for {Facility 1}, {Facility ...} , and the total, rounded up to the nearest integer.

Refurbished Asset i During	Quantity Recycled During Monitoring	Project Emissions During Monitoring	Quantity Recycled During Monitoring	Project Emissions During Monitoring	Quantity Recycled During Monitoring	Project Emissions During Monitoring

[3] The process-specific emissions factors are calculated by dividing the total emissions per process by the total quantity processed. The total emissions per process are calculated by multiplying the total energy consumption by the fuel-specific emissions factors in tCO_2e/MWh.

Monitoring Period	Period – {Facility 1}	Period - {Facility 1}	Period - {Facility 2}	Period - {Facility 2}	Period - {Facility 3}	Period - {Facility 3}
	{Facility 1}		{Facility ...}		Total	
	metric tonnes	tCO_2e	metric tonnes	tCO_2e	metric tonnes	tCO_2e
{Asset 1}						
{Asset 2}						
{Asset ...}						
Total						

4.4 Leakage Emissions

No leakage is expected as all of the emissions outside the project boundary, such as transportation, are assumed equivalent in both baseline and project scenarios. Emissions directly related to processing, recycling, and refurbishment are fully captured within the project boundary, ensuring no net additional emissions are introduced by project activities.

4.5 Achieved GHG Emissions Avoided and CO_2e Removals

The achieved GHG emissions avoided are calculated using Equation 7, combining the steps undertaken in Section 4.1 and 4.3 using Equations 1 – 6.

Equation 7: Total emissions avoided

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y = Emission reductions in year y (tCO_2e)
BE_y = Baseline emissions in year y (tCO_2e)
PE_y = Project emissions in year y (tCO_2e)
LE_y = Leakage emissions in year y (tCO_2e)

In the table below, the total list of assets and achieved GHG emissions avoided during the monitoring period are presented for {Facility 1}, {Facility ...}, and the total.

Monitoring Period	Facility	Order Quantity	Avoided Emissions	Baseline Emissions	Project Emissions	Leakage Emissions
		metric tonnes	tCO_2e	tCO_2e	tCO_2e	tCO_2e
1 January {YYYY} – 31 December {YYYY}	{Facility 1}					
	{Facility ...}					
	Total					

5 Monitoring

5.1 Data and parameters Available at Validation

Data / Parameter:	$SE_{,i}$

Data unit:	tCO_2e/tonne
Description:	Specific CO_2e emissions factor for production of material or component i measured in tCO_2e/tonne in year y
Source of data:	{Enter source of data}
Monitoring frequency:	{Enter monitoring frequency}
Purpose of data:	Calculation of baseline emissions
Any comment:	{Enter comment if applicable}

Data / Parameter:	$EF_{f,CO2}$
Data unit:	tCO_2e/MWh
Description:	Emissions factor for fossil fuel consumption
Source of data:	{Enter source of data}
Monitoring frequency:	{Enter monitoring frequency}
Purpose of data:	Calculation of emissions from fossil fuel consumption at facilities and third parties.
Any comment:	{Enter comment if applicable}

Data / Parameter:	$EF_{el,y}$
Data unit:	tCO_2e/MWh
Description:	$EF_{el,y}$: Emissions factor for electricity consumed by the facility in year y
Source of data:	{Enter source of data}
Measurement procedures (if any):	{Enter measurement procedures, if applicable}
Monitoring frequency:	{Enter monitoring frequency}
Purpose of data:	Calculation of emissions from electricity consumption at facilities and third parties.
Any comment:	{Enter comment if applicable}

5.2 Data and Parameters Monitored

Data / Parameter:	$Q_{rc,i,y}$
Data unit:	Metric tonnes
Description:	Quantity of material i recycled and sent to a processing or manufacturing facility in year y
Source of data:	{Enter source of data}
Measurement procedures (if any):	{Enter measurement procedures, if applicable}
Monitoring frequency:	{Enter monitoring frequency}
QA/QC procedures:	{Enter QA/QC procedures}
Any comment:	{Enter comment if applicable}
Final value for 2023	{Enter final value(s)}

Data / Parameter:	$Q_{ru,i,y}$
Data unit:	Metric tonnes

Description:	Quantity of material i refurbished and sent to a processing or manufacturing facility in year y
Source of data:	{Enter source of data}
Measurement procedures (if any):	{Enter measurement procedures, if applicable}
Monitoring frequency:	{Enter monitoring frequency}
QA/QC procedures:	{Enter QA/QC procedures}
Any comment:	{Enter comment if applicable}
Final value for year(s) in scope	{Enter final value(s)}

Data / Parameter:	$Q_{total,y}$
Data unit:	Metric tonnes
Description:	Total quantity of materials processed at facility in year y
Source of data:	{Enter source of data}
Measurement procedures (if any):	{Enter measurement procedures, if applicable}
Monitoring frequency:	{Enter monitoring frequency}
QA/QC procedures:	{Enter QA/QC procedures}
Any comment:	{Enter comment if applicable}
Final value for year(s) in scope	{Enter final value(s)}

Data / Parameter:	$EC_{total,y}$
Data unit:	MWh
Description:	Electricity consumption at the facility in year y
Source of data:	{Enter source of data}
Measurement procedures (if any):	{Enter measurement procedures, if applicable}
Monitoring frequency:	{Enter monitoring frequency}
QA/QC procedures:	{Enter QA/QC procedures}
Any comment:	{Enter comment if applicable}
Final value for year(s) in scope	{Enter final value(s)}

Data / Parameter:	$FC_{f,total,y}$
Data unit:	MWh
Description:	Fossil fuel consumption in the facility in year y r
Source of data:	{Enter source of data}
Measurement procedures (if any):	{Enter measurement procedures, if applicable}
Monitoring frequency:	{Enter monitoring frequency}
QA/QC procedures:	{Enter QA/QC procedures}
Any comment:	{Enter comment if applicable}
Final value for year(s) in scope	{Enter final value(s)}

5.3 Monitoring Plan

The monitoring plan is set up to ensure that real, measurable GHG emissions reductions can be monitored, recorded and reported. The monitoring plan will be implemented by the project owner during the project operation. The details of the monitoring plan are specified below.

5.3.1 Monitoring institution

{ENTITY} is responsible for the implementation of the monitoring plan.

5.3.2 Data to be Monitored

As specified in section 5.2., the following data is monitored by {ENTITY}:

Data Monitored	Unit	Description
$Q_{rc,i,y}$	Metric tonnes	Quantity of material i sorted and processed in year y
$Q_{ru,i,y}$	Metric tonnes	Quantity of material i refurbished and sent to a processing or manufacturing facility in year y
$Q_{total,y}$	Metric tonnes	Total quantity of materials processed at facility in year y
$EC_{total,y}$	MWh	Electricity consumption at the facility in year y
$FC_{f,total,y}$	MWh	Fossil fuel consumption in the facility in year y.

5.3.3 Equipment for monitoring

1. Weighing of incoming waste commodity or products

- Add details on weighing equipment

2. Weighing of outgoing materials and refurbished assets)

- Add details on weighing of outgoing materials and refurbished assets

3. Measuring of electricity consumption

- Add details on how electricity consumption is measured

4. Measuring of fossil fuel consumption

- Add details on how (and which) fossil fuel consumption is measured

6 Appendices

Appendix 1 – Calculated Emissions Factors for Processes at XX Facilities and Third Parties

Below, the emissions factors for {ENTITY}'s individual facilities are presented. Minor discrepancies may occur due to rounding conventions. For a detailed breakdown of how these values were derived please refer to the attached {EMISSIONS FACTOR CALCULATION SPREADSHEET} containing calculations.

1.1 {Facility 1}

Process	Facility	Fuel type	Emissions in Monitoring Period	Quantity Processed in Monitoring Period	Process Emissions Factor
			tCO_2e	metric tonnes	tCO_2e/tonne
{PROCESS 1}	{Facility 1}				
{PROCESS 2}	{Facility 1}				
{PROCESS ...}	{Facility 1}				

1.2 {Facility X...}

Process	Facility	Fuel type	Emissions in Monitoring Period	Quantity Processed in Monitoring Period	Process Emissions Factor
			tCO_2e	metric tonnes	tCO_2e/tonne
{PROCESS 1}	{Facility ...}				
{PROCESS 2}	{Facility ...}				
{PROCESS ...}	{Facility ...}				

Appendix 2 – Emissions Factors for Electricity and Fossil Fuels used in Recycling and Refurbishing Processes

Fuel Type	Emissions Factor	Comment	Source
	tCO_2e/MWh		
Electricity grid {LOCATION}			

{FOSSIL FUEL 1}			
{FOSSIL FUEL ...}			

Appendix 3 - Emissions Factors per Asset and Material for Baseline Calculations

Material/Asset i	Type	Specific Emissions Factor (SE_i)	Specific Emissions Factor (SE_i)	Comment	Source
		tCO_2e/US ton	tCO_2e/tonne		
{ASSET 1}	Asset				
{ASSET ...}	Asset				
{MATERIAL 1}	Material				
{MATERIAL ...}	Material				

Appendix 4 – Avoided Emissions Summary of Calculation per Commodity – Recycling

Below, the avoided emissions summary for each commodity are presented for the total, and for each facility. For a detailed breakdown of how these values were derived please refer to the attached spreadsheets titled {FACILITY AVOIDED EMISSIONS SPREADSHEET}.

Recovered materials – {FACILITY 1}

Recovered Material i during Monitoring Period	Quantity Recovered During Monitoring Period	Specific CO_2e Emissions factor SE_i[4]	Baseline Emissions During Monitoring Period
	metric tonnes	tCO_2e/metric tonne	tCO_2e
{MATERIAL 1}			
{MATERIAL 2}			
{MATERIAL ...}			
Total			

Recovered materials – {FACILITY ...}

[4] For sources for baseline materials emissions factors please refer to Appendix 3.

Recovered Material i during Monitoring Period	Quantity Recovered During Monitoring Period	Specific CO_2e Emissions factor $SE_{,i}$[5]	Baseline Emissions During Monitoring Period
	metric tonnes	tCO_2e/metric tonne	tCO_2e
{MATERIAL 1}			
{MATERIAL 2}			
{MATERIAL ...}			
Total			

Recovered materials – Combined All Facilities

Recovered Material i during Monitoring Period	Quantity Recovered During Monitoring Period	Specific CO_2e Emissions factor $SE_{,i}$[6]	Baseline Emissions During Monitoring Period
	metric tonnes	tCO_2e/metric tonne	tCO_2e
{MATERIAL 1}			
{MATERIAL 2}			
{MATERIAL ...}			
Total			

Appendix 5 – Avoided Emissions Summary of Calculation per Commodity – Refurbishing

For a detailed breakdown of how these values were derived please refer to the attached spreadsheets titled {FACILITY AVOIDED EMISSIONS SPREADSHEET}.

Refurbished assets – {FACILITY 1}

Asset	Quantity Processed	Baseline Emissions	Project Emissions	Avoided Emissions
	metric tonnes	tCO_2e	tCO_2e	tCO_2e
{ASSET 1}				
{ASSET 2}				
{ASSET ...}				
Total				

Refurbished assets – {FACILITY ...}

Commodity	Quantity Processed	Baseline Emissions	Project Emissions	Avoided Emissions
	metric tonnes	tCO_2e	tCO_2e	tCO_2e
{ASSET 1}				
{ASSET 2}				
{ASSET ...}				
Total				

[5] For sources for baseline materials emissions factors please refer to Appendix 3.
[6] For sources for baseline materials emissions factors please refer to Appendix 3.

Refurbished assets – All Facilities

Commodity	Quantity Processed	Baseline Emissions	Project Emissions	Avoided Emissions
	metric tonnes	tCO_2e	tCO_2e	tCO_2e
{ASSET 1}				
{ASSET 2}				
{ASSET ...}				
Total				