VCS Tool

VT0012

ACCOUNTING NON-VCS CO_2 IN CCS PROJECTS

Version 1.0

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Sectoral Scope 16: Carbon Capture and Storage

This tool was developed by the CCS+ Initiative and Verra. The CCS+ Initiative is a collaboration of 48 member companies. Perspectives Climate Group GmbH and South Pole Carbon Asset Management Ltd. served as the secretariat and consultants to the initiative throughout the development of this tool.

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1 SUMMARY DESCRIPTION

This tool provides procedures and requirements to allocate project emissions and leakage emissions for projects eligible under the most recent version of VCS methodology *VM0049 Carbon Capture and Storage* where non-VCS CO_2 (i.e., CO_2 that does not generate credits in the VCS Program) flows through the project boundary.

For projects capturing CO_2 from biomass feedstocks (i.e., bioenergy carbon capture and storage), VCS tool *VT0013 Differentiating Reductions and Removals in CCS Projects* must be used to determine the composition of carbon dioxide streams before this tool is used to account for the flows of non-VCS CO_2.

The total quantity of non-VCS CO_2 injected ($Q_{CO2,nonVCS,injected,y}$) is calculated in Equation (5).

Project emissions from non-VCS CO_2 ($PE_{nonVCS\ CO2,y}$) are calculated in Equation (17).

Leakage emissions from non-VCS CO_2 ($LE_{nonVCS\ CO2,y}$) are calculated in Equation (18).

2 SOURCES

This tool is used in combination with the most recent versions of *VM0049* and the following VCS Program modules and tools:

Capture Modules

- *VMD0056 CO_2 Capture from Air (Direct Air Capture)*
- *VMD0059 CO_2 Capture from Bioenergy*

Transport Module

- *VMD0057 CO_2 Transport for CCS Projects*

Storage Module

- *VMD0058 CO_2 Storage in Saline Aquifers and Depleted Hydrocarbon Reservoirs*

Other Modules, Tools, and Requirements

- *VT0010 Emissions from Electricity Consumption and Generation*
- *VT0013 Differentiating Reductions and Removals in CCS Projects*
- *Geologic Carbon Storage (GCS) Non-Permanence Risk Tool*
- *GCS Requirements*

3 DEFINITIONS

In addition to the definitions set out in the *VCS Program Definitions* and *VM0049*, the following definitions apply to this tool.

Non-VCS carbon dioxide (non-VCS CO_2)
Carbon dioxide that flows through a carbon capture and storage (CCS) project boundary and does not generate credits under the VCS Program (types described in Figure 1)

Segment
A defined section within a project boundary where separate or comingled CO_2 streams (i.e., VCS and non-VCS CO_2 streams or those eligible for reductions and removals) are captured, processed, transported, or stored

4 APPLICABILITY CONDITION

This tool is applicable to project activities eligible under the most recent version of VM0049 where non-VCS CO2 streams enter, leave, or are stored in the project boundary.

5 PROCEDURES

5.1 Determining Quantity of Non-VCS CO_2 Injected

Four types of non-VCS CO_2 must be accounted for to determine the quantity of non-VCS CO_2 injected, as described below.

- **Non-VCS CO_2 Streams Captured:** Non-VCS CO_2 is **captured** at a facility within the project boundary and transported and stored **inside** the project boundary but is ineligible for crediting. This is shown in Figure 1 with a solid green line. The VCS CO_2 stream is shown as a black solid line. This type of non-VCS CO_2 flows through measurement point *c* and measurement point *i.* At each measurement point *c* and *i,* this type of non-VCS CO_2 is measured together as a part of the total captured or injected CO_2.

- **Non-VCS CO_2 Streams Received**: Non-VCS CO_2 is **received** from capture facilities outside the project boundary and transported and stored **inside** the project boundary. This is shown in Figure 1 with a green dashed line. This type of non-VCS CO_2 flows through measurement point *j* and measurement point *i*. At each measurement point *i,* it is measured together as a part of the total injected CO_2.

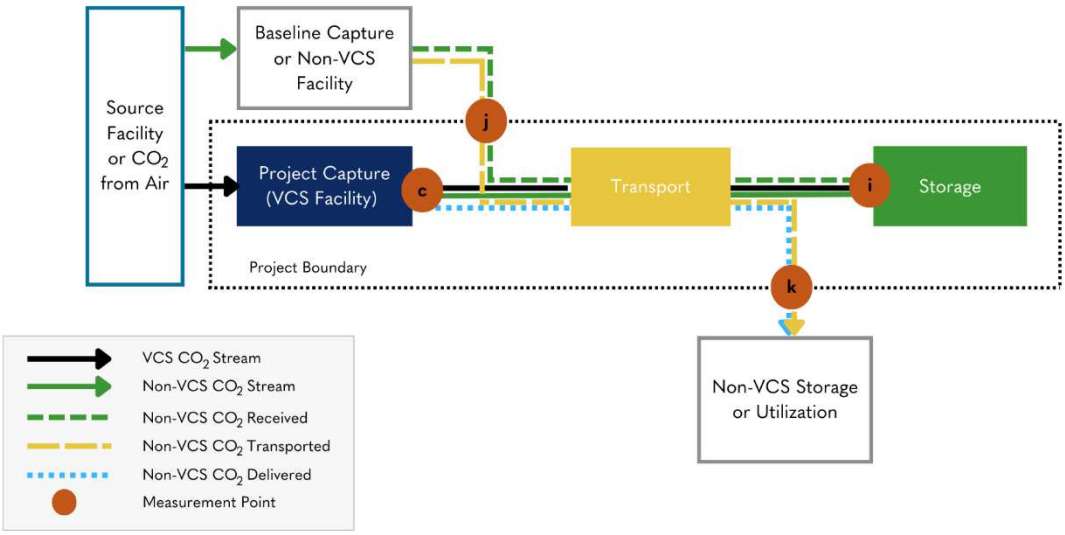
Note – For capacity expansion projects in VM0049 capture modules, the amount of CO_2 that would have been captured in the absence of the project (i.e., the amount of CO_2 in the baseline) is considered a received stream of non-VCS CO_2 and must be accounted

separately from the CO_2 captured in the project activities, using this tool. Figure 1 illustrates this scenario.

- **Non-VCS CO_2 Streams Transported:** Non-VCS CO_2 is only **transported** through the project boundary. It is captured outside the project boundary and delivered **outside** the project boundary. This is shown in Figure 1 where a non-VCS CO_2 stream (yellow long-dashed line) flows into and out of the project boundary. This type of non-VCS CO_2 flows through measurement point *j* and measurement point *k*. Where applicable, both received and transported non-VCS CO_2 streams are measured together at each measurement point *j*.

- **Non-VCS CO_2 Streams Delivered:** Non-VCS CO_2 is captured in the project boundary and **delivered** for storage or utilization **outside** the project boundary. This is shown in Figure 1 with a blue dotted line. This type of non-VCS CO_2 stream flows through measurement points *c* and *k*. Non-VCS CO_2 delivered and VCS CO_2 are measured together at each measurement point *c*.

Figure 1. Types of non-VCS CO_2 streams



The amount of non-VCS CO_2 captured in the project boundary and injected (solid green line) or delivered outside the project boundary (blue dotted line) must be determined using Equation (1).

$$Q_{CO2,nonVCS,c,y} = Q_{Total\ CO2,c,y} \times R_{nonVCS\ CO2,c,y} \quad (1)$$

Where:

$Q_{CO2,nonVCS,c,y}$ = Non-VCS carbon dioxide captured in the project boundary at each measurement point *c* in year *y* (t CO_2)

$Q_{Total\ CO2,c,y}$ = Total carbon dioxide measured at each measurement point *c* in year *y* (t CO_2)

$R_{nonVCS\ CO2,c,y}$ = Ratio of non-VCS carbon dioxide to total carbon dioxide at each measurement point *c* in year *y* (dimensionless)

5.1.1 Determining non-VCS CO_2 Captured

A project-specific method for determining the ratio of captured non-VCS CO_2 to the total captured CO_2 ($R_{nonVCS\ CO2,c,y}$) must be defined in the project description and monitoring report for each measurement point *c* and must include:

1) CO_2 captured from ineligible biomass as described in *VMD0059 CO_2 Capture from Bioenergy*,

2) CO_2 captured from excess non-traceable biomass as described in Section 5.1.1.1, and

3) any other project specific non-VCS CO_2 flows, defined as follows:

   a) as a fixed value (e.g., zero).

   b) as a project-specific variable with a fixed cap (e.g., the first 10 000 t CO_2 captured in the crediting period).

   c) algorithmically (e.g., the quantity of CO_2 captured after the first 50 000 t CO_2 are captured in the crediting period).

   d) as a variable dependent on other quantities (e.g., 25% of captured CO_2).

5.1.1.1 CO_2 captured from excess non-traceable biomass

The discount calculated in this section incentivizes project proponents to move away from using non-traceable biomass over time when capturing CO_2 from bioenergy. No more than 30% of the total biomass that would have been used in the baseline may be non-traceable biomass in the first year of a project. Project proponents must reduce non-traceable biomass use by 10% each subsequent project year compared to the previous year to avoid discounted reductions. No credits can be generated from non-traceable biomass after the first crediting period.

Equation (2) determines the captured emissions from non-traceable biomass discounted from total facility reductions.

$$R_{non-VCS\ CO2,c,y} = \frac{\sum_b (m_{A\_nt,b,c,y} \times w_{nt,b,c,y}) \times \frac{44}{12}}{Q_{Total\ CO2,c,y}} \quad (2)$$

Where:

$m_{A\_nt,b,c,y}$ = Adjusted quantity of non-traceable biomass type *b*, on a dry basis, generating emissions captured at capture facility *c* in year *y* (t)

$w_{nt,b,c,y}$ = Weighted average mass fraction of carbon in non-traceable biomass type *b*, on a dry basis, generating emissions captured by capture facility *c* in year *y* (t carbon/t biomass feedstock)

44/12 = Ratio of molecular weight of carbon dioxide to carbon

Equation (3) determines the adjusted quantity of non-traceable biomass generating emissions at capture facility *c*.

$$m_{A\_nt,b,c,y} = m_{nt,b,c,y} - \text{MIN}\left(m_{nt,b,c,y}, \left(m_{BV,b,c} \times (1-0.1)^{n}\right)\right) \quad (3)$$

Where:

$m_{nt,b,c,y}$ = Mass of non-traceable biomass type *b*, on a dry basis, generating emissions captured by capture facility *c* in year *y* (t)

$m_{BV,b,c}$ = Base value for non-traceable biomass type *b*, on a dry basis, generating emissions captured by capture facility *c*, as calculated in Equation (4) (t)

0.1 = Default annual adjustment factor

n = Number of years since project start date

Determination of Base Value ($m_{BV,b,c}$)

The base value represents the average consumption of non-traceable biomass type *b* at the source facility prior to the project start date. This value is determined in Equation (4) as the lesser of the annual average consumption of non-traceable biomass or 30% of the total annual biomass consumption.

$$m_{BV,b,c} = \text{MIN}\left(m_{AV\_nt,b,c}, 0.3 \times \sum_{c}\left(m_{AV,T,c}\right)\right) \quad (4)$$

Where:

$m_{AV\_nt,b,c}$ = Average mass of non-traceable biomass *b*, on a dry basis, consumed in the pre-project activity at the source facility relevant to capture facility *c* (t)

0.3 = Limit on non-traceable biomass use

$m_{AV,T,c}$ = Average total biomass consumption, on a dry basis, in the pre-project activity at the source facility relevant to capture facility *c* (t)

The quantity of non-VCS CO_2 injected in the project boundary in year *y* is quantified using Equation (5).

$$Q_{CO2,nonVCS,injected,y} = \sum_{j} Q_{Total\ CO2,j,y} + \sum_{c} Q_{CO2,nonVCS,c,y} - \sum_{k} Q_{Total\ CO2,k,y} \quad (5)$$

Where:

$Q_{CO2,nonVCS,injected,y}$	=	Non-VCS carbon dioxide injected in the project boundary in year *y* (t CO_2)
$Q_{Total\ CO2,j,y}$	=	Total carbon dioxide measured at each measurement point *j* in year *y* (t CO_2)
$Q_{CO2,nonVCS,c,y}$	=	Non-VCS carbon dioxide captured in the project boundary at each measurement point *c* in year *y* (t CO_2)
$Q_{Total\ CO2,k,y}$	=	Total carbon dioxide measured at each measurement point *k* in year *y* (t CO_2)

5.2 Determining Non-VCS CO_2 Project and Leakage Emissions

Project proponents must apply the following four steps to allocate project and leakage emissions between VCS and non-VCS CO_2 streams:

- Step 1: Identify segments
- Step 2: Identify emissions and CO_2 flows in segments
- Step 3: Select an option to allocate project and leakage emissions
- Step 4: Calculate total project and leakage emissions associated with VCS and non-VCS CO_2 streams

5.2.1 Step 1: Identify Segments

Project proponents must identify the segments of the project in the project description. The project proponent should aim to maximize the accuracy and simplicity of both measurement and quantification activities when defining segments.

When identifying segments, the following requirements apply:

1) The segment should be defined at the most granular level afforded by the metering equipment (e.g., if multiple pieces of equipment with individual metering are involved in a process, each piece of equipment should be treated as an individual segment).
2) Each individual process must not be assigned to more than one segment.
3) Segments must not straddle module boundaries.
4) Descriptions of each segment and its boundaries must be included in the project description.

5.2.2 Step 2: Identify Emissions and CO_2 Flows in Segments

For each segment *g* the project proponent must identify:

1) CO_2 flows entering and exiting the segment, and whether they are VCS, non-VCS, or commingled flows, defining $Q_{nonVCS\ CO2,g,y}$ and $Q_{Total\ CO2,g,y}$.

2) project and leakage emissions as determined in the relevant module for the segment (i.e., capture, transportation, or storage) under *VM0049*.

5.2.3 Step 3: Select an Option to Allocate Project Emissions

Project proponents must choose one or a combination of the following options to allocate the corresponding project emissions and leakage for each segment.

5.2.3.1 Option 1: Assign All Project and Leakage Emissions to VCS CO_2 stream

This option is applicable to all projects. Equations (6) and (7) assign all project and leakage emissions from a given segment to the VCS CO_2 stream. This is the most conservative option.

$$PE_{VCS\ CO2,g,y} = PE_{Total,g,y} \quad (6)$$

$$LE_{VCS\ CO2,g,y} = LE_{Total,g,y} \quad (7)$$

Where:

$PE_{VCS\ CO2,g,y}$ = Project emissions from segment *g* in year *y* associated with VCS carbon dioxide streams (t CO_2)

$PE_{Total,g,y}$ = Total project emissions generated from segment *g* in year *y*, calculated in the relevant module for the segment (i.e., capture, transportation, or storage) under *VM0049* (t CO_2)

$LE_{VCS\ CO2,g,y}$ = Leakage emissions from segment *g* in year *y* associated with VCS carbon dioxide streams (t CO_2)

$LE_{Total,g,y}$ = Total leakage emissions generated from segment *g* in year *y*, calculated in the relevant module for the segment (i.e., capture, transportation, or storage) under *VM0049* (t CO_2)

As all project and leakage emissions are assigned to VCS CO_2 streams in this option, project and leakage emissions for non-VCS CO_2 streams are zero for the segment, as given in Equations (8) and (9).

$$PE_{nonVCS\ CO2,g,y} = 0 \quad (8)$$

$$LE_{nonVCS\ CO2,g,y} = 0 \quad (9)$$

Where:

$PE_{nonVCS\ CO2,g,y}$ = Project emissions from segment *g* in year *y* associated with non-VCS carbon dioxide streams (t CO_2)

$LE_{nonVCS\ CO2,g,y}$ = Leakage emissions from segment *g* in year *y* associated with non-VCS carbon dioxide streams (t CO_2)

5.2.3.2 Option 2: Differentiation Method

This option is applicable when CO_2 streams can be categorized entirely as VCS or non-VCS streams based on equipment or temporal differentiation. Equipment differentiation means that equipment involved in the processing of captured CO_2 has individual metering and the resulting emissions can be directly attributed to each CO_2 stream. Temporal differentiation means captured CO_2 streams flow at different times and equipment meters have a time resolution sufficient to resolve and attribute the emissions from each period accordingly. The project proponent must provide evidence to demonstrate that such differentiation exists.

Equations (10), (11), (12), and (13) assign the differentiated portion of project and leakage emissions to either VCS or non-VCS CO_2 streams.

$$PE_{VCS\ CO2,g,y} = \sum_{D} PE_{VCS\ CO2,g,D,y} \quad (10)$$

$$LE_{VCS\ CO2,g,y} = \sum_{D} LE_{VCS\ CO2,g,D,y} \quad (11)$$

$$PE_{nonVCS\ CO2,g,y} = \sum_{D} PE_{nonVCS\ CO2,g,D,y} \quad (12)$$

$$LE_{nonVCS\ CO2,g,y} = \sum_{D} LE_{nonVCS\ CO2,g,D,y} \quad (13)$$

Where:

$PE_{VCS\ CO2,g,y}$ = Project emissions from segment *g* in year *y* associated with VCS carbon dioxide streams (t CO_2)

$PE_{VCS\ CO2,g,D,y}$ = Project emissions from segment *g* in year *y* in differentiated equipment *D* or with temporal differentiation *D*, associated with VCS carbon dioxide streams (t CO_2)

$LE_{VCS\ CO2,g,y}$ = Leakage emissions from segment *g* in year *y* associated with VCS carbon dioxide streams (t CO_2)

$LE_{VCS\ CO2,g,D,y}$ = Leakage emissions from segment *g* in year *y* in differentiated equipment *D* or with temporal differentiation *D*, associated with VCS carbon dioxide streams (t CO_2)

$PE_{nonVCS\ CO2,g,y}$ = Project emissions from segment *g* in year *y* associated with non-VCS carbon dioxide streams (t CO_2)

$PE_{nonVCS\ CO2,g,D,y}$ = Project emissions from segment *g* in year *y* in differentiated equipment *D* or with temporal differentiation *D*, associated with non-VCS carbon dioxide streams (t CO_2)

$LE_{nonVCS\ CO2,g,y}$ = Leakage emissions from segment *g* in year *y* associated with non-VCS carbon dioxide streams (t CO_2)

$LE_{nonVCS\ CO2,g,D,y}$ = Leakage emissions from segment *g* in year *y* in differentiated equipment *D* or with temporal differentiation *D*, associated with non-VCS carbon dioxide streams (t CO_2)

5.2.3.3 Option 3: Mass Balance

This option is applicable where both of the following conditions are met:

1) VCS and non-VCS CO_2 streams are separately measured within a segment.
2) Measurements are available for both project and leakage emissions arising from activities or processes in a segment.

Equations (14) and (15) allocate project and leakage emissions, respectively, from a segment based on the fraction of the CO_2 stream that qualifies as VCS CO_2.

$$PE_{nonVCS\ CO2,g,y} = PE_{Total,g,y} \times R_{nonVCS\ CO2,g,y} \quad (14)$$

$$LE_{nonVCS\ CO2,g,y} = LE_{Total,g,y} \times R_{nonVCS\ CO2,g,y} \quad (15)$$

Where:

$PE_{Total,g,y}$ = Total project emissions generated from segment *g* in year *y*, calculated in the relevant module for the segment (i.e., capture, transportation, or storage) under *VM0049* (t CO_2)

$LE_{Total,g,y}$ = Total leakage emissions generated from segment *g* in year *y*, calculated in the relevant module for the segment (i.e., capture, transportation, or storage) under *VM0049* (t CO_2)

$R_{nonVCS\ CO2,g,y}$ = Ratio of non-VCS carbon dioxide to total carbon dioxide processed, transported, or stored in segment *g* in year *y* (dimensionless)

Equation (16) calculates the ratio of non-VCS CO_2 to the total CO_2 that is processed, transported, or stored in the segment.

$$R_{nonVCS\ CO2,g,y} = \left(\frac{Q_{nonVCS\ CO2,g,y}}{Q_{Total\ CO2,g,y}}\right) \quad (16)$$

Where:

$Q_{nonVCS\ CO2,g,y}$ = Non-VCS carbon dioxide processed, transported, or stored in segment *g* in year *y* (t CO_2)

$Q_{Total\ CO2,g,y}$ = Total carbon dioxide processed, transported, or stored in segment *g* in year *y*, as per Section 8.1 of *VM0049* (t CO_2)

5.2.4 Step 4: Calculate Total Project and Leakage Emissions from VCS and Non-VCS CO_2 Streams

Equation (17) calculates the total project emissions associated with VCS and non-VCS CO_2 flows as the sum of emissions from all segments in a module boundary.

$$PE_{nonVCS\ CO2,y} = \sum_{g} PE_{nonVCS\ CO2,g,y} \quad (17)$$

Where:

$PE_{nonVCS\ CO2,y}$ = Total project emissions associated with non-VCS carbon dioxide flows in the module boundary in year *y* (t CO_2)

The total amount of leakage emissions associated with non-VCS and VCS CO_2 flows are calculated as the sum of emissions from all segments in a module boundary as per Equation (18).

$$LE_{nonVCS\ CO2,y} = \sum_{g} LE_{nonVCS\ CO2,g,y} \quad (18)$$

Where:

$LE_{nonVCS\ CO2,y}$ = Total leakage emissions associated with non-VCS carbon dioxide flows in the module boundary in year *y* (t CO_2)

6 DATA AND PARAMETERS

6.1 Data and Parameters Available at Validation

Data/Parameter	$m_{AV\_nt,b,c}$
Data unit	t
Description	Average mass of non-traceable biomass *b*, on a dry basis, consumed in the pre-project activity at the source facility relevant to capture facility *c*
Equations	(4)
Source of data	On-site measurement
Value applied	Measured from belt weigher/weigh bridge, or calculated from receipts and invoices or publicly available official data
Justification of choice of data or description of measurement methods and procedures applied	Calculated as the average annual non-traceable biomass consumption during the three years immediately preceding the start date of the project activity. Where a facility has been operational for less than three years, the average consumption of non-traceable biomass must be calculated over the actual operational period of the source facility. Where actual consumption data are unavailable, the minimum value derived from regional or sector-specific benchmarks may be used to establish a limit for non-traceable biomass consumption by researching and analyzing similar projects within the region or sector.
Purpose of data	Calculation of the base value on a dry basis for non-traceable biomass type *b* generating emissions captured by capture facility *c*
Comments	None

Data/Parameter	$m_{AV,T,c}$
Data unit	t
Description	Average total biomass consumption, on a dry basis, in the pre-project activity at the source facility relevant to capture facility *c*
Equations	(4)
Source of data	On-site measurement
Value applied	Measured from belt weigher/weigh bridge or calculated from receipts/invoices
Justification of choice of data or description of	Average total biomass consumption is calculated as the average annual total biomass consumption during the three years immediately preceding the start date of the project activity. Where a source facility has been operational for less than three years, the average

measurement methods and procedures applied	consumption of total biomass may be calculated over the actual operational period.
Purpose of data	Calculation of the base value on a dry basis for non-traceable biomass type *b* generating emissions captured by capture facility *c*
Comments	None

6.2 Data and Parameters Monitored

Data/Parameter	$Q_{Total\ CO2,c,y}$ $Q_{Total\ CO2,k,y}$ $Q_{Total\ CO2,j,y}$ $Q_{Total\ CO2,g,y}$ $Q_{nonVCS\ CO2,c,y}$ $Q_{nonVCS\ CO2,g,y}$
Data unit	t CO_2
Description	Total carbon dioxide measured at each measurement point *c*, *j*, or *k* or entering segment *g* in year *y* Non-VCS carbon dioxide processed, transported, or stored in segment *g* in year *y*
Equations	(1), (5), (16)
Source of data	Measured using either volumetric flow meters or mass flow meters
Description of measurement methods and procedures to be applied	Direct measurement of CO_2 stream as per Section 8 of *VM0049* Measurements must be taken at the corresponding measurement points *c*, *j*, or *k*, where CO_2 enters or leaves a segment or the project boundary.
Frequency of monitoring/recording	Monitored continuously (i.e., one measurement at least every 15 minutes) and aggregated annually
QA/QC procedures to be applied	Measuring equipment (e.g., flow meters, weighing scale) must operate within the manufacturer's specified operating conditions and must be routinely calibrated, inspected, and maintained according to manufacturer specifications.
Purpose of data	Allocation of baseline and project emissions to VCS CO_2 and non-VCS CO_2 streams
Calculation method	As described in Section 8 of *VM0049*
Comments	None

Data/Parameter	$R_{nonVCS\ CO2,c,y}$
Data unit	dimensionless
Description	Ratio of non-VCS carbon dioxide to total captured carbon dioxide at each measurement point *c* in year *y*
Equations	(1)
Source of data	Defined by project proponent based on project design, agreements, or other contracts
Value applied	Zero for projects that only have non-VCS CO_2 streams that are received or transported. For projects with non-VCS CO_2 streams that are delivered, the project proponent must specify value in the project description.
Justification of choice of data or description of measurement methods and procedures applied	This value defines the ratio of non-VCS CO_2 to total CO_2 determined using quantities of CO_2 measured in accordance with the relevant capture module under VM0049.
Purpose of data	Allocation of baseline, project, and leakage emissions
Comments	This parameter must also define how metering imbalance, system vents, and fugitive emissions are accounted in consideration of system design and the nature of each non-VCS CO_2 stream (i.e., received, transported, or delivered).

Data/Parameter	$w_{nt,b,c,y}$
Data unit	t carbon/t biomass feedstock
Description	Weighted average mass fraction of carbon in non-traceable biomass type *b*, on a dry basis, generating emissions captured by capture facility *c* in year *y*
Equations	(2)(3)
Source of data	Values provided by the feedstock supplier in invoices are the preferred data source. Where these are unavailable, values may be sourced through measurement by the project proponent or operator of the source facility.
Description of measurement methods and procedures to be applied	Measurements must be carried out at accredited laboratories according to relevant international standards.
Frequency of monitoring/recording	The mass fraction of carbon should be obtained for each feedstock delivery.

QA/QC procedures to be applied	Verify whether the values are within the uncertainty range of the product of the IPCC default values as provided in Tables 1.2 and 1.3 in Chapter 1, Vol. 2 of the most recent version of the *IPCC Guidelines for National Greenhouse Gas Inventories*. Where the values fall below this range, collect additional information from the testing laboratory to justify the outcome or conduct additional measurements. The laboratories used for measurements by project proponents must have ISO 17025 accreditation.
Purpose of data	Calculation and differentiation of emissions associated with reductions and removals for mixed feedstocks
Calculation method	Weighted average annual values should be calculated for each feedstock delivery.
Comments	None

Data/Parameter	$m_{nt,b,c,y}$
Data unit	t
Description	Mass of non-traceable biomass type *b*, on a dry basis, generating emissions captured by capture facility c in year *y*
Equations	(3)
Source of data	On-site measurements
Description of measurement methods and procedures to be applied	Sum of measured quantities of non-traceable biomass from belt weigher/weigh bridge, or calculated from receipts and invoices or publicly available official data
Frequency of monitoring/recording	Measured for each load of non-traceable biomass generating emissions captured by capture facility over the course of the year
QA/QC procedures to be applied	The metering equipment must be installed and calibrated in accordance with the specifications of either local/national standards or the manufacturer. Where local/national standards or the manufacturer specification are not available, international standards (e.g., IEC, ISO) must be followed.
Purpose of data	Calculation and differentiation of emissions associated with reductions and removals in mixed feedstocks and to determine discount for the use of non-traceable biomass
Calculation method	Sum of measured quantities of non-traceable biomass from belt weigher/weigh bridge, or calculated from receipts and invoices or publicly available official data
Comments	None

7 REFERENCES

This tool does not include any references.

DOCUMENT HISTORY

Version	Date	Comment
v1.0	22 April 2025	Initial version