

Emissions Reporter Manual – ISO 14083

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1. Introduction

1.1. The Smart Freight Centre Conformity Assurance Scheme (SFC CAS) for 'Validation and Verification of GHG emissions statements for transport chains' provides a global scheme for independent verification of GHG emissions. It is based on the requirements set out in the ISO standards as well as others that are specific to the SFC scheme as outlined in Section 4. It also provides optional performance levels for reporters to apply for, as they move forward along their decarbonization journey – these criteria for these performance levels are also subject to verification, if the reporter wants to apply them.

1.2. The SFC CAS defines two technical scopes:

1.2.1. **ISO 14083 Scope:** covered in this document.

1.2.2. **MBM Specification Scope:** covered in the **Emissions Reporter Manual – MBM Specification** (SFC-PRO-007-2).

1.3. The **ISO 14083 Scope** of the SFC CAS aims to:

1.3.1. Recognize and encourage reporters' efforts to determine, disclose, manage and reduce their GHG emissions,

1.3.2. Provide a database for reporters to demonstrate that they comply with key standards for calculating and reporting GHG emissions in the transport sector,

1.3.3. Share tools with stakeholders, such as a template for Emissions Report and a list of tools and programs approved by SFC as being compliant with ISO 14083,

1.3.4. Provide high-quality training for emissions reporters and verifiers on the ISO 14083 standard,

1.3.5. Create a database of VVBs that reporters can trust to carry out a competent, impartial verification service,

1.3.6. Specify clear rules for verifying GHG emissions, appropriate for the transport sector, that ensure a consistent approach is applied to all reporters.

1.4. **The Emissions Reporter Manual - ISO 14083** (this document) provides the specific criteria and procedures under which an Emissions Reporter's (ER) disclosures become accepted under the SFC CAS, and by which the SFC CAS Performance Levels will be conferred. It also covers procedures that must be followed by ERs when preparing their Monitoring Plans and Emissions Reports, ahead of them being independently verified.

1.5. This procedure becomes effective on [the date of issue indicated above](#).



2. Scope and applicability

2.1. This document is applicable to all ERs seeking to be accepted under the ISO 14083 Scope of the SFC CAS following verification in accordance with the SFC CAS rules.

2.2. Participation in the SFC CAS is voluntary and based on objective criteria. The scheme is not discriminatory to ERs or VVBs.

3. Overview of the SFC CAS

3.1. Roles and Responsibilities

3.1.1. Emissions Reporters

3.1.1.1. ERs calculate and report their GHG emissions in conformance with the reporting standards set out in Section 4. They are responsible for their Monitoring Plan, assumptions, relevant calculations and claims, and for selecting and interacting with their VVB. After undergoing verification by their selected VVB, the VVB submits the Verification Opinion - which is the output of the verification process - to the ER along with a PDF of their final verified Emissions Report. The reporter, in turn, submits these to SFC. SFC then makes the opinion publicly available on the SFC Emissions Reporter database ([known as Listing](#)).

3.1.2. Validation and Verification Bodies

3.1.2.1. VVBs verify that the ER's Monitoring Plan, assumptions, calculations, and claims are transparent and conform to ISO 14083¹ and any other standard specified in their Monitoring Plan, and that declared emissions are accurate and in accordance with the standards and monitoring methodology defined in the Monitoring Plan.

3.1.2.2. VVBs must be able to demonstrate and maintain impartiality while conducting verification activities. VVBs are only eligible for SFC Approval if they are accredited to the verification standards outlined in Section 4, including approval for the transport scope for verification. VVBs must sign the required Agreement with SFC before they can perform verification in connection with the SFC CAS. The list of SFC approved VVBs is available on the SFC CAS website.

3.1.2.3. There are four stages of the verification process under the SFC CAS:

3.1.2.3.1. The ER appoints an SFC Approved VVB. The appointment and contracting shall include the scope of work that is comprehensive and suitable for the claims being made and the verification service sought.

¹ The applicable version of ISO14083 is the one in force at the time of monitoring and reporting. If an updated version is issued part way through the reporting period, the Emissions Reporter may continue to monitor and report in line with the old version for the object of that specific report; thereafter moving to the latest version for future reporting.



3.1.2.3.2. The VVB conducts verification of the declared emissions; the ER provides full access to the information needed by the VVB to complete its work.

3.1.2.3.3. The VVB provides a Verification Report containing its opinion; if the result is a verified² opinion, then the ER sends the PDF copies of the Verification Opinion and the final verified Emissions Report to SFC.

3.1.2.3.4. The relevant verification documents are published on the SFC website. See section 5.

3.1.3. Smart Freight Centre

3.1.3.1. The SFC CAS is managed by SFC. SFC is responsible for developing and managing the scheme. It maintains an impartial position in the freight/transportation market and does not develop emission calculation tools, nor does it provide consultancy or verification services.

3.1.3.2. SFC runs an Approval process for accredited [VVBs](#) to provide verification services under the SFC CAS. SFC also operates a database of [ER](#)'s verified disclosures and performance levels.

3.1.3.3. SFC reserves the right not to list VVBs or [ERs](#) where it deems that they do not conform with the scheme rules. SFC reserves the right to delist VVBs or [ERs](#) where it deems that they have not been verified in accordance with the scheme rules [or are in breach of their Agreement with SFC](#).

4. Documents

4.1. The rules and requirements for the SFC CAS are set out in the scheme documents. Complementing this document are other SFC procedures, templates and forms, and standards issued by external entities or SFC. SFC may issue new documents. The complete and current list of the scheme documents is available on the SFC CAS website.

4.2. SFC CAS documents are given a version number and specify their effective date. Where documents that are relevant for the SFC CAS are updated, the updates made will be summarized in an appendix table. If applicable, a transition period will be specified. VVBs approved by SFC and ERs listed by SFC will be informed of the updates.

4.3. Where documents are referenced - and such documents are updated - the most recent version of the document should be used, and their transition period considered.

4.4. The following are normative documents (i.e., standards) [for the ISO 14083 Scope](#):

A. Reporting standards:

4.4.1. ISO 14064-1, Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

² Or 'verified with comments'



4.4.2. ISO 14083, Greenhouse gases – Quantification and reporting of GHG emissions arising from transport chain operations

B. Verification standards:

4.4.3. ISO 17029, Conformity Assessment – General principles and requirements for Validation and Verification Bodies

4.4.4. ISO 14065, General principles and requirements for bodies validating and verifying environmental information

4.4.5. ISO 14064-3, Greenhouse gases – Part 3: Specification with guidance for the verification and validation of greenhouse gas statements

4.4.6. ISO 14066, Greenhouse gases – Competence requirements for validation teams and verification teams

4.5. The standards listed above are part of the requirements of the SFC CAS, and their requirements shall be met either by the ER (set A above) or the VVB (set B above).

C. Guidance:

4.6. The required scheme documents are complemented by guidance documents, which provide additional information to assist with the interpretation of standards - these are mentioned explicitly in ISO 14083 and/or published on the SFC website. An example of a guidance document is the **GLEC Framework (SFC-GUID-001)**. Reporters are expected to follow the recognized guidance or explain to their VVB why they have not and/or that the guidance they have followed is more robust.

D. Definitions:

4.7. Definitions as set out in ISO 17000 and the ISO standards referenced above apply to the SFC CAS.

5. Applications, Fees and Listing

5.1. SFC charges fees to cover administration costs, at the rates set out in the document **Assurance fees for Emissions Reporters (ASU-FEE-001-2)**.

5.2. To apply to the SFC CAS, ERs must complete an **Application Form (ASU-TPL-010-2)** and submit the signed application, along with all supporting evidence mentioned in the application form, to assurance@smartfreightcentre.org.

5.3. Applicants must also sign the **License Agreement SFC-ER (ASU-TPL-009-2)**, and pay the Listing Fee defined in the fee schedule. This fee covers the review of (only) one GHG Emissions Report per year, but more than one report can be submitted for listing.

5.4. The application shall only be considered when SFC has received all the documentation and the Listing Fee. Applicants should only apply when they are ready to submit their verified Emissions



Report and Verification Opinion. If these documents are complete and correct, SFC will process applications from ERs and list them on the SFC website within 30 calendar days of application.

5.5. Once the application is processed, SFC will add the [ER](#) to the list of verified [disclosures](#) on the SFC website, [under the calendar year of the date of the verified report \(the Listing Period\)](#). ERs can have multiple reports listed for each calendar year, providing they have paid that year's fee. Listing of one or more reports that have been verified in a new calendar year requires payment of a new Listing Fee.

5.6. Once Listed, SFC will keep that report on its database for 10 years, and a new year's fee will cover reports being added in new calendar years. In this way, in case an ER decides not to pay a certain annual fee, past reports will not be removed from the database until the 10-year period is over.

5.7. SFC defines two options for Listing of Emissions Reports:

5.7.1. **Reports to wider stakeholders**, where the Emissions Report is published alongside the Verification Opinion [or the Opinion is alongside a link to where the report is published by the ER and where the ER includes a link to the SFC listed opinion in their report (pdf or website)]

5.7.2. **B2B reports**, where both Verification Opinion and Emissions Report can remain private, and there is an access code that the ER can provide to its report user so they can access the opinion on the SFC website to obtain assurance. In this case, the SFC public website would just list the ER and the report number.

As part of their application ERs shall select which Listing options they choose, with the proviso that all reports to wider stakeholders (such as annual inventories) are on option 1.

6. Emissions Report

6.1. ISO 14083 defines the minimum content for reporting GHG emissions. Although no template or format is mandatory, clause 13.4.2 of ISO 14083 suggests the use of tables 1 and 2. SFC has made available a template for **Emissions Reports** (ASU-TPL-011-2) which is consistent with these tables and which can be used, and allows simplification where sections are not applicable. However, reporting can be achieved in various ways and formats provided that the minimum required content specified for the SFC CAS is included – this is outlined in the template.

6.2. Once the Emissions Report has been confirmed as ready for verification it can be shared with the VVB. But once the VVB has confirmed the Emissions Report is final and prepared their own Verification Report (VR), the Emissions Report must be printed to PDF format to give an unchangeable version. The VVB will provide the reporter with a PDF copy of their full VR.

6.3. [Regarding publication of the Emissions Report](#), where the Emissions Report PDF is placed on a website or passed onto a supplier or customer, the VVB's VR shall be incorporated into the PDF file of the Emissions Report, at the end.



6.4. Where the Emissions Report is published as pages on a website, the VVB's VR shall be published alongside it - either directly or accessible via a web link.

6.5. Where the Emissions Report is published as part of an annual financial report or sustainability report, for example, a summary of the VR must be published alongside the reported data with a web link to where the full VR can be accessed. The text of any summary published must be agreed with the VVB in advance of publication.

7. Performance Levels

7.1. SFC has defined three performance levels within which verified emissions reports may lie and for which **ERs** may apply. If the **ER** intends to apply for SFC recognition under a specific performance level, the associated criteria specified for that level will be included within the verification criteria checked by the VVB, and a statement made in the VR.

7.2. The levels intend to signal aspects which are considered important, such as completeness of the report, transparency and data quality. There is an extra level which results in a “+” on any level, as in level 1+, 2+, 3+, for reporters who choose to also include black carbon in the data reported.

7.3. The levels are described in table 1 below. All conditions and thresholds must be satisfied to achieve the required level. For data quality, there are two separate calculations: one for own fleet and another for subcontracted fleets; both must be satisfied to achieve the required level.

**TABLE 1 - LEVELS OF PERFORMANCE OF REPORTERS**

NOTE 1, NOTE 2

Criteria	LEVEL 1	LEVEL 2	LEVEL 3
1.Level of assurance of verification NOTE 3	Agreed Upon Procedures for new reporters, limited from 3 rd year onwards	Limited	Reasonable
2.Materiality for verification NOTE 4	-	-	≤ ±5% of overall declared emissions
3. Cut-offs for reporters NOTE 5	-	≤5% for overall emissions AND ≤20% for scope 3	≤5% for overall emissions AND ≤10% for scope 3
4. Public reporting for reporters NOTE 6	-	Overall carbon footprint	All data contained in the SFC report template
5a. Data quality: % primary data for own fleet NOTE 7	ISO 14083 compliance, but no threshold specified for data quality KPI	proportion of reported emissions calculated using primary-based data ≥ 60%	proportion of reported emissions calculated using primary-based data ≥ 80%
5b. Data quality: % default data for (sub)contracted fleet NOTE 7	As for 5a above	proportion of reported emissions calculated using default data ≤50%	proportion of reported emissions calculated using default data ≤10%
+ OPTIONAL (Plus grade)	+	+	+
6. Black carbon: If black carbon is calculated and verified, then this is a “+”, as in level 1+, level 2+ or level 3+	+	+	+

NOTES:

1. Emissions are to be calculated in metric tonnes.
2. All % values are determined on the basis of the freight operator's reported verified emissions (ie this is the denominator in the calculation).
3. This is a criterion that is NOT covered by ISO 14083, but must be defined in any verification service.
4. This is a criterion that is NOT covered by ISO 14083, but must be defined in any verification service. For levels 1 and 2, SFC does not define any threshold for materiality for verification. For level 3, SFC defines a threshold of 5%. A materiality threshold of 5% means that the VVB will still issue an opinion even if an AGGREGATE ERROR is detected that leads to a deviation of ±5% of emissions. But if the AGGREGATE ERROR leads to a deviation of ±5.1% then an opinion would not be issued.
5. Cut offs are the proportion of the data that can be excluded from the 'defined scope' of the report (i.e. deminimis exclusion). Cut-offs can be agreed to cover small emissions sources that should be within the 'defined scope' but are deemed deminimis and so can be ignored. Cut-offs are allowed by ISO 14083 clause 5.2.3 with no threshold specified, which corresponds to level 1. For level 2 and 3 alignment was sought with SBTi.
6. For level 1, it is not mandatory to publish emissions at all. For level 2 the overall carbon footprint must be made publicly available by the reporter. For level 3, all APPLICABLE information covered in the SFC template must be publicly available. Reporters do not actually need to use the SFC template, nor issue one document only, as long as it is transparent where all the information is published.
7. This indicator consists in the proportion of emissions reported that are calculated using data from primary, modeled or default data – for the reporter's own and/or subcontracted fleets, as applicable.

8. Monitoring Plan

8.1. Content of the Monitoring Plan

8.1.1. An ER must prepare a Monitoring Plan³, which is a document describing their methodology and calculation approach. This document can be given another name (e.g. Standard Operating Procedure [SOP], Reporting Approach, Accounting Policy), provided the minimum content described below is covered:

8.1.1.1. Definitions.

8.1.1.2. Documentation of roles and responsibilities including quality control procedures and interactions with subcontractors.

8.1.1.3. Detailed documentation of data flow from source (e.g. invoice/meter reading for scope 2 electricity use) to report, including identification of where data is held by a third party on the Reporter's behalf,

8.1.1.4. Estimation methods,

8.1.1.5. Assumptions underlying the gathering of data, calculation factors, estimates and other calculations, for example,

8.1.1.6. Justification for any deviations from recommended data sources and calculation methods,

8.1.1.7. Description of calculations (including final calculation tools and templates),

8.1.1.8. The internal controls over data generation, acquisition, accounting and reporting, which might include: data generation and validation, calculations, reporting and decision-making timetable; project tracker of progress against timetable, as well as controls over IT and data systems used for storage, processing and manipulation of relevant data; and control over third parties that supply services relevant to GHG reporting.

8.1.1.9. Description of the process for retention, and the retention period, of evidence to support data and information underpinning the Emissions Report.

8.2. Uncertainty and materiality

8.2.1. SFC recognises that there is uncertainty inherent in the use of calculation tools, estimates, models, defaults factors etc. The Monitoring Plan must include a clear description of any such

³ Both ISO14064-1 and ISO14083 are context specific so not all elements will apply to an individual Emissions Reporter, therefore the Reporter is required to compile a Monitoring Plan that details the elements that are applied in their context. Verifiers will check both the content of the Monitoring Plan against the ISO requirements; AND the implementation of the Monitoring Plan to confirm that emissions calculations are conformant with all three documents.



estimate approaches applied. Definitions of uncertainty and materiality can be found in the **VVB Manual - ISO 14083** (ASU-PRO-002-2).

8.3. Internal controls and data retention

8.3.1. An ER shall have an internal control system that shall comply with clause 8 of ISO 14064-1 on GHG inventory quality management.

8.3.2. Emissions Reporters shall retain supporting evidence of the emissions calculations for a minimum period of five years. This is in case there is a dispute about declared emissions or the verification process.

8.3.3. Standard passenger mass (see clause 12.1.2 of ISO 14084) is not defined in the body text of the ISO 14083, although there is a reference to a "standard equivalence of 100kg for a passenger and their baggage" in Annex A (A.4.2) for the Aviation sector. The standard equivalence of 100kg for a passenger and their baggage shall be used unless there is an adequate justification. This justification shall be included in the Monitoring Plan.

9. Related policies and other information

9.1. ER Manual – MBM Specification (SFC-PRO-007-2)

9.2. GLEC Framework (SFC-GUID-001).

9.3. Assurance Fees for Emissions Reporters (ASU-FEE-001-2)

9.4. Emissions Reporter Application Form (ASU-TPL-010-2)

9.5. License Agreement SFC-ER (ASU-TPL-009-2)

9.6. Emissions Report (ASU-TPL-011-2)

9.7. VVB Manual – ISO 14083 (ASU-PRO-002-2)

Version history

1	30/06/2023	First edition
2	30/09/2024	Following creation of the new scope: SFC CAS – scope MBM Specification, adaptation of this document this procedure to refer only to SFC CAS – scope ISO 14083. New template.

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