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 3. It also provides optional performance levels for organizations to apply for, as they move forward along their decarbonization journey – criteria for these performance levels are also subject to verification, if the reporter wants to apply them.

1.2. The SFC Validation and Verification Body Manual (this document) provides the specific criteria and procedures under which a Validation and Verification Body (VVB) becomes approved (and maintains approval) as a SFC VVB. It also covers procedures that must be followed by VVBs when providing verification services, as well as for qualification of individual verifiers.

1.3. This document becomes effective on 3rd July 2023.

2. Scope and applicability

2.1. This document is applicable to all VVBs seeking to conduct verifications as part of the SFC CAS. Specifically, this document contains:

- Procedures for a VVB to apply for (and maintain) approval as an SFC VVB,
- Procedures for individuals to be approved as SFC qualified verification personnel, and maintain their SFC approval,
- Procedures for a VVB to carry out verification activities.

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

3. Documents

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

3.2. SFC assurance documents are labeled with 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. If applicable, a transition period will be specified. VVBs approved by SFC and Emission Reporters registered with SFC will be informed of the updates.

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

3.4. The following are normative documents (i.e., standards) for the SFC CAS:

A. Reporting standards:

- ISO 14064-1, Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- ISO 14083, Greenhouse gases – Quantification and reporting of GHG emissions arising from transport chain operations

B. Verification standards:

- ISO 17029, Conformity Assessment – General principles and requirements for Validation and Verification Bodies
- ISO 14065, General principles and requirements for bodies validating and verifying environmental information
- ISO 14064-3, Greenhouse gases – Part 3: Specification with guidance for the verification and validation of greenhouse gas statements
- ISO 14066, Greenhouse gases – Competence requirements for validation teams and verification teams

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

C. Guidance:

3.6. 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 the ISO 14083 and/or published on the SFC website. An example of a guidance document is the GLEC Framework. 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:

3.6. Definitions as set out in the **Assurance glossary** (ASU-PRO-003-2), ISO 17000 and the ISO standards referenced above.

4. Scope of approval and fees

4.1. The type of claims to be subject to verification are GHG emissions for an individual specified transport chain operation (i.e., reported historic data). The criteria against which the claim is to be assessed are listed in section 3B.

4.2. SFC has defined three performance levels within which verified emissions reports may lie and for which Emissions Reporter's may apply; if the Emissions Reporter 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; performance level criteria are set out in the

Emissions Reporter Manual (ASU-PRO-001-2). Approval of VVBs is given for all performance levels, for a worldwide scope for a set period.

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

5. Approval of VVBs

5.1. Approval process

5.1.1. Approval will only be granted to a legal entity registered under applicable national laws, irrespective of whether the entire organization or a part of it performs verification services.

5.1.2. Verification bodies are eligible to provide verification services under the SFC CAS if they are accredited under ISO 17029 for application of ISO 14065 for verification of GHG statements for the transport sector, by an accreditation body that is a signatory of the International Accreditation Forum Multilateral Agreement for GHG Verification.

5.1.3. An approved VVB shall maintain their ISO accreditation. Failure to maintain accreditation, or lapse of accreditation, may result in the immediate suspension and revocation of SFC approval. If a VVB loses, changes or does not renew its accreditation during the three-year period from the date of approval, it shall immediately notify SFC.

5.1.4. To apply to become an approved VVB with the SFC CAS, organizations must complete the **VVB application form** (ASU-TPL-002-2) and submit the signed application, along with all supporting evidence and declarations mentioned in the application form to assurance@smartfreightcentre.org. Applicants must also pay the application fee defined in the fee schedule. The application shall only be considered when SFC has received all the documentation and the application fee.

5.1.5. The objective of a VBB approval assessment is to determine whether the VVB complies with additional SFC requirements regarding eligibility, competence and operational capability to perform verification services for the SFC CAS.

5.1.6. All documentation provided by a VVB as part of their application shall be in English. The language used in approval assessments is English.

5.1.7. All decisions regarding the approval, suspension, or revocation of VVBs approval status are made at the sole discretion of SFC, upon recommendation of the Assurance Manager and decision of a senior person that is a member of the SFC Assurance Committee.

5.1.8. The approval of VVBs by SFC is provided on a recurring basis. The approval is valid for three years from the date of the approval decision. For re-approval the VVB shall re-submit

the full set of information, updated as required, and no later than eight weeks prior to the end of the three-year period.

5.1.9. If the documentation is found to be incomplete, SFC shall inform the VVB of the missing elements within 15 calendar days of the application being submitted. If the documentation is complete, SFC shall acknowledge this to the VVB, and finalize an **Assessment report** (ASU-TPL-007-2) within four weeks of having acknowledged the application.

5.1.10. Based on the report findings, SFC shall decide whether to approve or reject the VVB and inform the VVB accordingly.

5.1.11. VVBs can apply without having approved verifiers, but the application cannot be approved until they have two approved personnel as detailed in section 6. Until this happens, SFC can issue an “in principle approval”, which documents that this is the only element that is missing.

5.1.12. The approval process is finalized once the **License agreement for VVBs** (ASU-TPL-008-2) is signed by the VVB and SFC. The date of this agreement is the date the approval period begins.

5.1.13. Where an application is rejected, SFC shall provide the applicant with a justification. Reapplication by the VVB may be submitted no sooner than six months after the date of communication of rejection by SFC and shall include details of how issues identified by SFC have been addressed.

5.1.14. A list of VVBs approved to undertake verification services under the SFC CAS is available on the SFC website, containing information on:

- Contact details,
- List of approved auditors,
- Approval date and status (approved, suspended or revoked),
- A link to the accreditation body certificate for its ISO 17029/ 14065 accreditation certificate.

5.2. Suspension or revocation of VVB status

5.2.1. If SFC receives complaints about VVBs it has approved from Emission Reporters or other stakeholders, it shall investigate the allegations made. If as a result of this investigation SFC finds evidence that a VVB intentionally provided false information, intentionally omitted to provide required information, deliberately violated any approval requirement, or performs poorly on regular basis. SFC shall promptly submit a draft assessment report to the VVB documenting its findings. On the basis of this report, SFC may suspend or revoke the VVB’s approved status; this shall be reflected in its updated status on the VVB database accessible on the SFC website.

5.2.2. The VVB shall be offered an opportunity to present clarification or further evidence before its approval is suspended or revoked, and may later appeal such decisions.

5.2.3. Within 30 calendar days of suspension or revocation of SFC approval, the VVB shall remove all SFC assurance marks from its website and communication materials. VVBs that have been suspended or revoked shall not carry out verification services associated with the SFC CAS, and shall not use SFC assurance marks for any purpose.

5.2.4. An approved VVB may voluntarily request to withdraw its approval status by providing a written notice to SFC requesting such withdrawal.

5.3. Notification of changes and SFC rights

5.3.1. A VVB shall notify SFC at least 30 calendar days before implementing a planned change in its legal, commercial, or organizational status. It shall also inform SFC of significant changes to organizational structure and top management, and of personnel directly involved in the SFC CAS.

5.3.2. One of SFC's roles is to oversee VVBs operating under the scheme, both for their initial approval and ongoing performance. Where SFC identifies serious shortcomings in a VVB's performance that are relevant for accreditation, it may provide feedback and require the VVB to address these issues.

5.3.3. SFC reserves the right not to list approved VVBs or register clients of VVBs where it deems that they do not conform with the scheme rules. SFC reserves the right to delist VVBs or their clients where it deems that they have not been verified in accordance with the scheme rules.

5.3.4. SFC also reserves the right to take action against VVBs in accordance with the provisions set out in the agreements signed between individual VVBs and SFC. The rights and obligations for VVBs are set out in these agreements.

6. Verification personnel

6.1. General requirements

6.1.1. VVB may fulfil the ISO 17029/ 14065 requirement for sufficient resources by using internal or external personnel (i.e., individuals). The VVB takes full responsibility for any work carried out by external individuals, and obtains from them a written agreement that they shall comply with all applicable VVB requirements and procedures, including confidentiality and impartiality.

6.1.2. VVBs shall not subcontract key verification activities. This does not apply to the subcontracting of individual external verifiers, as mentioned above.

6.1.3. Verification services must be carried out by persons who have been approved by SFC.

6.1.4. Overall, the VVB shall have a minimum of:
6.1.4.1. one qualified person approved by SFC who will lead a verification team (lead verifier), and
6.1.4.2. one qualified person approved by SFC who will conduct the technical review team (technical reviewer),
at least one of which must be an employee of the VVB.

6.2. Approval of verification personnel

6.2.1. Technical reviewers shall have the same qualification as a lead verifier, and also be approved by SFC.

6.2.2. Verification personnel shall take the mandatory training specified by SFC, and the subsequent examination, and score at least 70% in order to be SFC approved.

6.2.3. Applications for approval of personnel shall be submitted by the VVB using the **Verifier application form** (ASU-TPL-003-2), via an email to assurance@smartfreightcentre.org which is also sent to the person to be approved.

6.2.4. Requests for removal of personnel from the approved list shall also be made by the VVB to the same SFC mail address given above with the approved person copied in, or vice versa.

6.2.5. Personnel may be listed as approved for more than one VVB.

6.3. Training and examination

6.3.1. Approved personnel shall participate in all mandatory training and examinations run by SFC to maintain their SFC approval. Approved VVB personnel shall take at least one Continuous Professional Development training per year and any additional training sessions when new versions of applicable standards are released or when relevant updates are made to SFC requirements. VVBs and approved personnel will be notified of such training events.

6.3.2. Personnel who score less than 70% shall retake the training and the subsequent exam.

6.3.3. SFC also accepts requests from individual verifiers to attend the training, if they want to work for more than one VVB. However even approved verifiers cannot conduct verifications except through an approved VVB.

6.3.4. Any approved verifier who has not carried out a verification against this CAS within 24 months following the award of their approved status must retake the exam if they wish to continue as an approved SFC verifier.

6.3.5. Training and examination completion are monitored by SFC.

6.4. Competence of verification personnel

6.4.1. The VVB, verification team and verifier shall meet the competence requirements set out in ISO 14065 and ISO 14066.

6.4.2. A verifier shall have the competence required to assess the compliance of the GHG statements or calculation tools against all applicable requirements, including:

- knowledge of all applicable standards that constitute criteria for verifying claims against (e.g. ISO 14083, ISO 14064-1),
- knowledge of all applicable SFC requirements and procedures,
- competences specified in Annex E to ISO 14065, clauses E.1 though to E.2.3.3,
- knowledge of verification/ auditing,

6.4.3. A verifier shall also have knowledge of transport chain, including:

- Modelling of transport systems and establishment of service level, travel distance and baseline transport modes for all freight modes of transport,
- Typical GHG reduction activities such as Introduction of modal shifts, fuel switches and less GHG intensive transport modes in the transport of freight and passengers,
- Typical GHG emissions, such as Well-to-Wheel CO2 equivalent emissions from fuel use in transport activities, and Well-to-Wheel CO2 equivalent emissions associated with power generation,
- Data input types (primary, etc.),
- Activity- and fuel-based approaches to calculating emissions,
- Base methodology from the GLEC framework (e.g.: mode specific emission calculations),
- Methods for the evaluation of GHG emissions from transport modes by means of the quantification of primary energy use and standard GHG emission factors for power and fuels,

6.4.4. A verifier shall also have knowledge of GHG accounting and monitoring, including:

- GHGs eligible under the Kyoto Protocol,
- Life Cycle Analysis methodology in the logistics sector (e.g.: Well-to-Wheel),
- Methods for allocation of emissions,
- Regional application when it comes to fuel emission factors and emission intensity values,
- Use of Global Warming Potential and conversion of non-CO2 GHG to equivalent CO2 emissions,
- Indirect evaluation of GHG emissions: use of GHG standard emission factors based on energy content and service level,
- Quality control of measurements, including the concepts of measurement range, measurement uncertainty (accuracy, precision, sensitivity and bias) and meter calibrations,

- Judgement of use case related data relevance and granularity.

6.4.5. A VVB shall maintain up-to-date personnel records of management and administrative personnel, as well as verification personnel including those external to the VVB. These records shall include relevant documentation related to recruitment, evaluations, qualifications, performance monitoring, training, experience, affiliations, professional status, and any consultancy services that the personnel have provided that could be relevant for verification activities in which they are involved.

7. Verification process

7.1. Planning the verification

7.1.1. VVBs shall conform to the requirements of ISO 17029, ISO 14065 and ISO 1464-3. Set out below are additional requirements needed for the SFC CAS, or clarifications are to how an element of these standards are to be applied for the SFC CAS.

7.1.2. Before commencing a verification engagement, the VVB will establish the objectives and identify the type of GHG claim to be verified: for the SFC CAS, claims are reportable GHG emissions (i.e., reported historic data).

7.1.3. Criteria are the set of requirements against which the emissions report is verified: for the SFC CAS these are the relevant requirements of ISO 14083 and ISO 14064-1 as documented in the Emissions Reporter's Monitoring Plan[1].

7.1.4. The level of assurance shall be established in discussion with the Emissions Reporter, considering the SFC Performance Level being sought - **see Emissions Reporter Manual** (ASU-PRO-001-2) for details. The justification for the level of assurance shall be documented by the VVB in the Verification Opinion.

7.2. Uncertainty and materiality

7.2.1. SFC recognizes 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 estimate approaches applied.

7.2.2. If a calculation tool or model is 'SFC approved' then no further checking is required of it on the part of the verifier, given that the verifier can presume that – provided the input data is valid – a correct output will be returned and inherent uncertainty is acceptable. If a calculation

[1] 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 conform that emissions calculations are conformant with all three documents.

tool or model is NOT 'SFC approved' then the verifier will need to satisfy themselves that it returns valid results. This may include requesting a validation report from the supplier of the model and/or other information on how the model has been developed and submitted to independent validation.

7.2.3. For a default factor, SFC recognizes those mentioned within the latest versions of ISO 14083, or from another authoritative source such as published by the United Nations, governments or GHG Protocol. Inherent uncertainty associated with recognized defaults is accepted.

7.2.4. ISO14064-3 defines materiality as: the concept that individual misstatements or aggregation of misstatements in data reported could influence the intended user's decisions. Misstatements are defined as: errors, omissions, misreporting or misrepresentations.

7.2.5. Materiality is used both for planning verification activities and their focus, and in formulating the final conclusion. Materiality has both qualitative and quantitative aspects: when assessing qualitative materiality, VVBs must determine whether the report conforms to rules and methodology requirements. When assessing quantitative materiality, VVBs must assess the impact of errors etc. on the total sum of GHG emissions stated in the Emissions Report.

7.2.6. Materiality threshold is the 'defined threshold' above which a verifier will not accept aggregate misstatements in the reported emissions. This means - within the defined scope of the emissions report, and ignoring acceptable 'uncertainty' as defined above - misstatements including errors in data/ values used in calculations, formula errors, missing data, calculation errors etc. The 'defined threshold' is a % of the total aggregate emissions agreed between the VVB and the Emissions Reporter and stated in the final verification report. A materiality threshold of 5% (for example) means aggregate errors exceeding ±5% of the total sum are deemed material and would result in a 'not verified' opinion statement. Uncertainties inherent in the methodology itself are not to be considered.

7.2.7. The materiality shall be established in discussion with the Emissions Reporter, considering the SFC Performance Level being sought - **see Emissions Reporter Manual** (ASU-PRO-001-2) for details. The justification for the materiality shall be documented by the VVB in the Verification Opinion.

7.3. Carrying out the verification

7.3.1. Once a contractual agreement has been reached, and a competent verification team selected, the VVB is required to follow the steps included in section 6 of 14064-3 to carry out the verification itself. Subsequently the VVB shall follow sections 8, 9 and 10 of 14064-3.

7.3.2. In the first year of the first verification cycle, the VVB shall visit the main location(s) where emissions calculations are conducted and where records are stored. Over time (if the organization is reporting annually) circumstances may justify verifications can be conducted remotely because none of the relevant criteria mentioned in ISO 14064-3 are met.

7.3.3. Verification of the reported GHG emissions shall focus on the appropriate selection of Transport Chain Operation (TCO), Transport Chain Element (TCE), Transport Operation Category (TOC)/ Hub Operation Category (HOC), correct use of input data sources and the correct calculation of emissions including plausibility checks of inputs values.

7.3.4. Regarding the responsibility for acceptance of inputs taken into account as part of verification activities, conformity assessment results which are generated prior to the engagement or are provided by the client can be accepted by the VVB with no further verification needed, provided they have been verified in a manner consistent with SFC requirements and a verification report provides the adequate level of detail about the basis of the opinion.

7.3.5. The verifier shall prepare a verification report containing its opinion. The report shall document, among other things, any outstanding misstatements, either material or not.

7.3.6. The VVB shall establish procedures which it considers necessary to obtain sufficient and appropriate evidence for its verification conclusion (both for limited and reasonable assurance levels). The procedures shall follow section 6.1.3 of 14064-3.

7.3.7. The following activities are expected in planning and carrying out verification activities:

7.3.7.1. Understand the scope and boundary (organizational and operational) of the claims made.

7.3.7.2. Review the organization's GHG reporting guidance and Monitoring Plan, including the methodology for calculating GHG emissions.

7.3.7.3. Understand the organization's procedures for:

- data measurement and collection (relating to TCEs and TOCs),
- data measurement and collection (relating to fuel and transport activity),
- determining data sources, and related systems and internal control procedures.

7.3.7.4. Review the:

- emissions sources identified by the organization and assess completeness,
- sources of emissions factors and Global Warming Potentials used in calculating its GHG emissions,
- Quality control procedures carried out by the organization on the data collected,
- Review the calculations and assertions relating to the data type (own fleet, carrier direct, carrier data from programs, models / tools, default factors) claimed by the organization,
- Review the organization's declaration of total logistics GHG emissions (Scope 1, 2 and 3) and carry out tests of detail to confirm the accuracy of the calculated emissions,
- Review the organization's emissions intensity data and carry out tests of detail to confirm the accuracy of the calculated emissions.

7.3.8. VVBs shall obtain and examine sufficient and appropriate evidence in relation to the organization's claims relating to the verification criteria outlined in its Monitoring Plan.

7.3.9. Verifiers shall use the templates for checklists and for reports (including opinions) prepared by SFC: **VVB checklist** (ASU-TPL-004-2) and **VVB report** (ASU-TPL-005-2). VVBs and verifiers can adapt these templates to their own layouts, as long as the content is maintained. Examples of relevant verification trails and evidence are given in the checklist.

8. Related policies and other information

- Glossary (ASU-PRO-003-2)
- Emissions Reporter Manual (ASU-PRO-001-2)
- Assurance Fees for VVBs (ASU-FEE-001-2).
- VVB application form (ASU-TPL-002-2)
- Verifier application form (ASU-TPL-003-2)
- License agreement with VVBs (ASU-TPL-008-2)
- Verification checklist (ASU-TPL-005-2)
- Verification report (ASU-TPL-006-2)
- Emissions report (ASU-TPL-011-2)
- SFC assessment report (ASU-TPL-007-2)

Version history

1	30/06/2023	First edition