

Principles and Best Practices for Book and Claim Systems in Heavy Transport

Book and Claim Community

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Introduction

1 The scale and complexity of heavy transport operations and the high price premium on low
2 emission fuels and/or services make heavy transport decarbonization challenging. Book and claim
3 systems are a promising value chain approach for reducing financial and infrastructural barriers
4 while enabling decarbonization. This approach drives vital and real uptake of low-emission
5 transportation services and solutions that would otherwise not have occurred. These systems
6 function today to connect supply and demand for decarbonized transport, and support scaling the
7 low carbon market through bankable long-term offtake agreements for new supply.

8 To be effective, book and claim systems should measure and deliver GHG emissions reductions
9 impact and facilitate scalability. Adherence to a set of foundational principles can streamline
10 progress toward this goal.

11 In early 2024, the Book and Claim Community¹ hosted discussions with a diverse group of expert
12 stakeholders to collaboratively develop and refine a document that captures the key principles
13 and best practices for credible book and claim systems in heavy transport applications. The
14 resulting document presents an aligned set of principles, best practices, and relevant resources
15 for book and claim systems, which is informed by practical successes and challenges faced by
16 practitioners working to decarbonize the heavy transport sector, and reflects the current state of
17 knowledge and remaining gaps.

18 At this document's publication, initiatives such as the Greenhouse Gas Protocol (GHG Protocol)²,
19 the Science Based Targets initiative (SBTi)³, the Advanced and Indirect Mitigation (AIM) Platform⁴,
20 Carbon Disclosure Project (CDP), International Organization for Standardization (ISO),
21 governmental bodies, and others have been engaged in consultative efforts to evaluate and
22 address the role of market-based mechanisms, including book and claim solutions, both in heavy
23 transport and across other sectors. This document and the Book and Claim Community focus only
24 on voluntary book and claim in heavy transport. However, this document, alongside other work

¹ For more information, please read here: www.bookandclaimcommunity.org

² In 2023, GHG Protocol launched a process to update its standards, including a dedicated survey and call for proposals on the role of market-based accounting approaches and/or project accounting methods. GHG Protocol plans to provide guidance addressing the role of such methods in GHG emissions reporting and/or target-setting in an upcoming standard. <https://ghgprotocol.org/blog/market-based-and-project-accounting-approaches-where-we-are-now>

³ In November 2023, the SBTi initiated a call for evidence on the effectiveness of the use of environmental attribute certificates in corporate climate targets. In April 2024, the SBTi released a statement acknowledging that the utilization of environmental attribute certificates for abatement purposes in Scope 3 emissions could serve as an additional mechanism, if supported by robust policies, standards and procedures based on scientific evidence. The SBTi plans to release first draft of rules on this by July 2024. <https://sciencebasedtargets.org/news/statement-from-the-sbti-board-of-trustees-on-use-of-environmental-attribute-certificates-including-but-not-limited-to-voluntary-carbon-markets-for-abatement-purposes-limited-to-scope-3>

⁴ For more information, please read here: <https://aimplatform.org/aim-platform-releases-guiding-principles-for-stakeholder-input>

25 products from the broader Book and Claim Community, can serve as a resource to inform,
26 reinforce, and complement these ongoing efforts. We invite broader stakeholders to engage and
27 collaborate with the Book and Claim Community as we strive to coordinate engagement with key
28 reporting and target-setting initiatives.

29 We call on heavy transport stakeholders to implement the principles and best practices outlined
30 in this document to scale credible and effective book and claim systems that enable transport
31 decarbonization.

Contributing and supporting individuals and organizations

32 **Contributing individuals and organizations**

33 This document represents consensus among the contributing parties, reflecting conceptual
34 agreement on the principles and best practices outlined here. However, this consensus does not
35 imply that all contributing parties fully implement every best practice within the document given
36 their various roles in the value chain. It is the result of thorough discussion, synthesis, and
37 alignment of diverse expert viewpoints, which ensures that the final recommendations are both
38 robust and broadly supported by both industry practitioners and civil society within the heavy
39 transport sector. Below is an alphabetical list of those who have played a pivotal role in crafting
40 this document:

41 **Contributing Individuals**

42 [Please email us the appropriate name if you are comfortable signing on as an individual
43 practitioner as aligned with this document]

44 **Contributing Organizations**

45 [Please email us the appropriate name if your organization is comfortable signing on as aligned
46 with this document]

47 **Supporting individuals and organizations**

48 In addition to the above contributors, this document has been reviewed and supported by other
49 key stakeholders in the heavy transport sector. These individuals and organizations, while not

50 directly involved in the drafting process, have provided their support for the principles and best
51 practices outlined in this document. Listed alphabetically, they include:

52 **Supporting Individuals**

53 [Please email us the appropriate name if you are comfortable signing on as an individual
54 practitioner as aligned with this document]

55 **Supporting Organizations**

56 [Please email us the appropriate name if your organization is comfortable signing on as aligned
57 with this document]

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Framework and Definitions

58 Book and claim is a chain of custody model that allows environmental attributes⁵ to be decoupled
59 from the physical products or services that would ordinarily directly carry those attributes,
60 creating a separate certificate⁶ that allows buyers without physical access to decarbonized
61 transportation services or fuels to financially enable the decarbonization of heavy transport and
62 claim its benefits.

63 A book and claim system refers to the market infrastructure (sustainability certification systems,
64 registries, and accounting standards) that allows fuel or transport service providers to “book” the
65 environmental attributes of a fuel and/or transport service they’ve generated, creating certificates,
66 so that customers can then “claim” the emissions benefit represented by these certificates for
67 climate disclosures.

68 The effective functioning of book and claim systems relies on collaboration and coordination
69 among various stakeholders, including standard setters, registry designers and operators, fuel and
70 transport service providers, auditors (including certification and verification bodies), buyers, and
71 market intermediaries.

72 For the purposes of this document,

- 73 • A principle is a fundamental statement that should apply to all book and claim systems in
74 heavy transportation supply chains, across all transportation modes. Every credible book
75 and claim system or piece of infrastructure should align with the listed principles to
76 maintain its validity and integrity.
- 77 • A best practice is a recommended action or approach that stakeholders may adopt to align
78 with its corresponding principle. The best practices provided in this document offer a
79 snapshot of prevailing approaches today. As markets evolve, we acknowledge that best
80 practice approaches and methods will need to develop and adapt to align with market
81 change.

⁵ Environmental attributes are characteristics of energy sources and other activities that represent specific sustainability aspects of those sources and activities. These attributes may include carbon intensity, GHG emissions reductions and other sustainability characteristics.

⁶ A certificate represents the environmental attributes (including carbon intensity, GHG emissions reductions, and other sustainability characteristics that substantiate a claim) associated with a given quantity of lower carbon fuel or transport service (e.g. metric ton of neat SAF or MJ of energy). For the purposes of this document, we will use the term “certificate,” though this is also commonly referred to as a BCU (book and claim unit), credit, or token.

82 We recognize that some technical requirements that are critical for establishing the spectrum of
 83 certificate quality across every transport use case (i.e., vintage, emissions reduction thresholds)
 84 are not covered in this document. Because these requirements are system- and mode-specific,
 85 they are outside of this document’s scope.

86 The order of principles in this document follows this progression:

- 87 1. Principles for establishing fundamental transportation book and claim system elements;
- 88 2. Principles for developing and operating those elements;
- 89 3. Principles for optimizing usability and credibility of those elements.

90 Definitions of key terms are provided in footnotes at their first occurrence, with a comprehensive
 91 glossary at the end of the document.

92 **Recommendations for Practitioners**

93 All stakeholders, regardless of their role, are encouraged to thoroughly read and adhere to each
 94 principle outlined in this document. Every principle is accompanied by specific best practices
 95 tailored to distinct roles, reflecting the varied responsibilities and actions across different
 96 stakeholders. Below is a summary table that outlines which principles include relevant best
 97 practices tailored to each practitioner role:

Practitioner Role	Principles with relevant best practices
Book and claim system designer	1-11
Registry operator	1-6, 8-9, 11
Book and claim system participants (fuel and/or transport service provider, buyer, or market intermediary)	1-11
Auditor ⁷ (Certification and/or Verification body)	1-5, 7, 8

⁷ Auditor is used throughout this document to refer to a Conformity Assessment Body, which covers both Certification Bodies and Validation/Verification Bodies. Specifically, we refer to Conformity Assessment Bodies that are independent of the organization that provides the claim, have no user interests in that claim (i.e. third-party), and are accredited to certify to a particular standard.

Establishing Fundamental System Elements

98 1. Require certification⁸ of environmental attributes

99 **Principle:**

100 Independent certification of environmental attributes of a physical fuel or solution’s supply chain
101 is a prerequisite for booking and claiming⁹, where appropriate certification schemes exist.

102 **Best Practices:**

- 103 • The supply chain for low-emissions fuels and/or services should be independently certified
104 according to broadly recognized regulated or voluntary sustainability certification
105 schemes.¹⁰ For example:
 - 106 ○ In aviation, the Carbon Offsetting and Reduction Scheme for International Aviation
107 (CORSIA)¹¹ and EU Renewable Energy Directive (RED)¹² recognize such schemes for
108 sustainable aviation fuel (SAF) – currently the Roundtable on Sustainable
109 Biomaterials (RSB) and the International Sustainability and Carbon Certification
110 system (ISCC). Both organizations also have comparable voluntary standards (RSB
111 Global and ISCC PLUS).
 - 112 ○ In maritime shipping, the International Maritime Organization (IMO)¹³ references
113 CORSIA-recognized schemes when using biofuel. Additionally, EU RED

⁸ Certification is the process of evaluating something (in this document, a transportation fuel and service supply chain’s environmental attributes) against a set of established criteria by an independent third-party auditor.

⁹ Certification of environmental attributes (e.g. of the fuel or service) does not necessarily validate the legitimacy of the certificate (BCU, credit, or token, etc.) of book and claim solutions.

¹⁰ Sustainability certification schemes encompass standardized frameworks or methodologies designed to evaluate and confirm the sustainability performance of products, services, or processes (referred to as environmental attributes in this document). These schemes are typically overseen by independent organizations or regulatory bodies, which accredit auditors to certify operators to their schemes.

¹¹ For more information, please read here: <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Eligible-Fuels.aspx>

¹² For more information, please read here: https://energy.ec.europa.eu/topics/renewable-energy/bioenergy/voluntary-schemes_en

¹³ For more information, please read here: <https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/FFT%20Project/Second%20study%20-%20sustainability%20and%20verification.pdf>

- 114 acknowledges over a dozen voluntary¹⁴ and national certification schemes for
115 alternative fuels. This list is expanding to include schemes for Renewable Fuels
116 from Non-Biological Origin (RFNBOs). The IMO is also developing its Guidelines on
117 the life cycle GHG intensity of marine fuels¹⁵ and developing mid-term measures
118 that may introduce additional sustainability criteria for current and emerging
119 standards.
- 120 ○ Similar regulated and voluntary schemes are in development for other modes and
121 use cases.
 - 122 ● If appropriate certification schemes do not yet exist, at a minimum, an independent third-
123 party audit of environmental attributes, at a scope agreed by a buyer and seller, should be
124 implemented.

125 2. Use credible normative documents

126 **Principle:**

127 Book and claim systems are consistent with at least one relevant independent standard,
128 framework, or guideline where they exist.

129 **Best Practices:**

130 In order of applicability—broad and multimodal to mode-specific (not exhaustive):

- 131 ● Transport book and claim systems should align as much as possible with general book and
132 claim standards such as *ISO 22095 Chain of Custody*¹⁶ and the forthcoming standard on
133 *Book and Claim*¹⁷ in the same series.
- 134 ● Various standards, frameworks and guidelines detail approaches for transport book and
135 claim use cases. For example, the Smart Freight Centre’s (SFC) multimodal *Voluntary*
136 *Market Based Measures Framework for Logistics Emission Accounting and Reporting*¹⁸

¹⁴ For more information, please read here: https://energy.ec.europa.eu/topics/renewable-energy/bioenergy/voluntary-schemes_en

¹⁵ For more information, please read here: <https://www.imo.org/en/OurWork/Environment/Pages/Lifecycle-GHG---carbon-intensity-guidelines.aspx>

¹⁶ For more information, please read here: <https://www.iso.org/standard/72532.html>

¹⁷ For more information, please read here: <https://www.iso.org/standard/84426.html#lifecycle>

¹⁸ For more information, please read here: <https://www.smartfreightcentre.org/en/projects/ongoing-projects/market-based-measures-accounting-framework/>

137 offers a consistent approach for climate disclosure of book and claim solutions for
138 transport services.

- 139 • For SAF in aviation, frameworks have been developed to structure book and claim systems
140 as implemented by registry operators, fuel providers and air transport providers, such as
141 the *RSB Book and Claim Manual*¹⁹ and the *ISCC Credit Transfer System*²⁰.
- 142 • Similar mode-specific documents are being developed for maritime and road.

143 3. Use credible registries²¹

144 **Principle:**

145 The issuance, transfer, and retirement of a certificate is recorded in a registry before a beneficiary
146 makes a claim about the environmental attributes recorded in that certificate.

147 **Best Practices:**

- 148 • For every transaction of a certificate, the issuance, transfer, and retirement of that
149 certificate should be managed on a credible registry that aligns with the principles listed
150 in this document. All actors involved in the lifecycle of the certificate—from creating to
151 claiming—should have accounts on that registry or at minimum be listed as beneficiaries
152 on the certificate.
- 153 • Registries should validate key information before issuing certificates to give participants
154 confidence that the certificates they receive and ultimately claim represent the correct
155 information.
- 156 • During early development stages for new book and claim use cases that lack robust
157 registries, basic record-keeping can suffice if essential information is maintained (for
158 example, beneficiary information, certification information, and other environmental
159 attributes information etc.). However, as use cases mature, accuracy, reliability and trust
160 in recorded data will become increasingly important. Transitioning to more robust digital
161 registry solutions—which are consistent with independent standards as assured by
162 independent third-party auditor, are transparent (see Principle 9), and have robust
163 governance (see Principle 7)—is essential.

¹⁹ For more information, please read here: <https://rsb.org/wp-content/uploads/2023/04/RSB-PRO-20-001-001-RSB-Book-and-Claim-Manual-3.0.pdf>

²⁰ For more information, please read here: https://www.iscc-system.org/wp-content/uploads/2023/12/ISCC-Credit-Transfer-System_System-Document_V1.0-1.pdf

²¹ Registry is a systematic collection of documented information or data that is organized and maintained according to specific requirements.

Core System Functionalities

164 4. Prevent erroneous double counting²²

165 **Principle:**

166 Book and claim system operators and participants share the collective responsibility of preventing
167 the erroneous double counting of interventions²³.

168 **Best Practices:**

- 169 • Registries should ensure that erroneous double issuance and erroneous double use of
170 certificates within their platform is impossible. This functionality can be supported by
171 digital traceability tools.
- 172 • To prevent erroneous double issuance between registries that work with the same types
173 of certificates, registries should establish secure systems that verify the same
174 environmental attributes of an underlying solution are only issued in one registry while
175 ensuring data privacy and following antitrust rules.
- 176 • To prevent erroneous double claiming, registry participants should ensure that their claims
177 match the information contained in certificates retired in their name and consult with
178 independent third-party auditors to validate their use of certificates towards their climate
179 disclosure.
- 180 • To prevent erroneous double use of the environmental attributes of a fuel or service,
181 providers and/or suppliers should either have an appropriate trader certification or should
182 undergo third-party and independent audit to verify that no double use of the
183 environmental attributes has occurred (including between the sale of the physical good or
184 service and the sale of the decoupled certificate).

²² Double counting in book and claim systems refers to the erroneous, duplicate or improper accounting of emission reductions, encompassing three main scenarios: double issuance (duplicate creation of certificates for the same solution), double claiming (multiple parties claiming the same certificates), double use (repeated utilization of a single certificate by the same party for multiple purposes).

Though, noting principle 6, multiple valid voluntary claims can be made in association with a single certificate, if claimed by actors at different points in the value chain. This parallels the scenario where multiple simultaneous claims can be made about the emissions linked to a specific product or activity (e.g. the same emissions associated with air transport are reported by a fuel provider, an aircraft operator, users of aviation services, and others, each falling into different accounting categories).

²³ An intervention is the action taken to produce a low carbon fuel and/or transport service that leads to the creation of a certificate. A single intervention can create both scope 1 and scope 3 certificates.

185 5. Ensure additionality²⁴

186 **Principle:**

187 Book and claim systems strive to implement commonly understood and accepted additionality
188 criteria.

189 Book and claim system participants adhere to agreed-upon additionality criteria to ensure that
190 certificates represent additional mitigation activities, including that the environmental attribute
191 can be credibly used to substantiate a voluntary claim by clarifying its relation to compliance
192 obligations.

193

194 **Best Practices:**

- 195 • If the definition and criteria of additionality are established in a bilateral transaction, they
196 should be included in the accompanying contractual documentation.
- 197 • Fuel and transport service providers should transparently disclose to the certificate buyer,
198 at minimum, the regulatory programs related to the specific mitigation activity that is the
199 basis for a certificate (incentives, obligations, and other related programs).
- 200 • Registry operators should require additionality declarations during the issuance process of
201 certificates.
- 202 • Certificate buyers should ensure that they stipulate the need for these claims to be eligible
203 for use for their voluntary claims, meaning that they specify additionality criteria in
204 contracts and use a registry that checks for this additionality requirement.
- 205 • Participants should transparently disclose their additionality assessment when reporting
206 and accounting for low carbon transportation.
- 207 • Independent and third-party auditing should be used to ensure adherence to the agreed-
208 upon definition and criteria of additionality.

209 6. Enable multiple distinct claims for the same voluntary 210 interventions

211 **Principle:**

²⁴ Additionality is a metric for evaluating whether the emissions reductions or profile associated with an intervention (e.g. certificate purchase) would have occurred absent the intervention. In particular, regulatory additionality assesses whether the activity is already required by and used towards a regulatory obligation.

212 Multiple valid voluntary claims can exist for a single intervention in heavy transport supply chains
213 if they are claimed by actors at different points in the value chain, mirroring accounting and
214 reporting norms for emissions in conventional transportation supply chains.

215 **Best Practices:**

- 216 • Certificate purchasers should transparently report their intervention in their climate
217 disclosures, indicating the accounting category for which it was purchased.
- 218 • In accordance with the GHG Protocol Corporate Standard²⁵, while only one company can
219 claim Scope 1 emissions due to their direct nature, multiple companies can claim the same
220 Scope 3 emissions provided they occur at different points in the value chain. This allows
221 for a comprehensive assessment of emissions across the supply chain, reflecting the
222 contributions of various entities involved in the production, distribution, logistics, and use
223 of low emission products or services.
- 224 • Certificates are simplest to track when scope 1 and scope 3 attributes remain linked. When
225 separated, the issuance, transfer, and application of scope 1 and scope 3 attributes from
226 the same intervention should be consistently tracked to maintain system integrity.
- 227 • A certificate for each scope 1 and at least one scope 3 category for each intervention
228 should have a clearly identified claimant to maintain alignment with standards such as
229 those set by the SBTi, ensuring both scopes are appropriately correlated.

²⁵ At the publication of this document, although book and claim solutions are not officially recognized by GHG Protocol outside of Scope 2, the concept of how to account for and report book and claim solutions are in accordance with GHG Protocol standards.

Optimizing Credibility and Function

230 7. Implement robust governance

231 **Principle:**

232 Decision-making processes within book and claim systems, including rule definition and
233 implementation, incorporate processes to uphold the collective interests of system participants.

234 **Best Practices:**

- 235 • Book and claim systems – and specifically normative documents and registries – should
236 establish robust governance structures encompassing distinct bodies responsible for
237 defining rules, formalizing stakeholder input, and overseeing decision-making processes.
- 238 • Book and claim system designers should actively avoid conflict of interest in decision-
239 making processes.
- 240 • Book and claim systems should require third-party and independent auditors to ensure
241 adherence to independent standards, frameworks or guidelines, where they exist, to
242 minimize the risk of self-declaration and enhancing transparency and integrity.
- 243 • Book and claim systems should incorporate dispute resolution processes to address issues
244 such as fraud, errors, appeals, and complaints. These processes should be transparent and
245 tailored to be effective for each participant's role. While these details may not be publicly
246 disclosed in every case, such as in bilateral contracts, all relevant participants should have
247 access to dispute resolution information.

248 8. Ensure data accuracy

249 **Principle:**

250 All actors in a book and claim system are responsible for ensuring accurate reporting and use of
251 data in their respective step of the chain of custody in order to reflect the certified characteristics
252 of the fuel and/or the service in a book and claim system.

253 **Best Practices:**

- 254 • Independent third-party auditors should verify the environmental characteristics of the
255 fuel and/or the service provided in adherence to a certification scheme.

- 256 • Book and claim system participants should collaboratively agree on a consistent method
257 for accounting transport activity and GHG emissions reductions, and ensure uniform data
258 granularity across different modes of transport if applicable.
- 259 • Registry operators are responsible for maintaining data consistency, accuracy, and
260 comparability across certificates, including values, calculations, and statements.
- 261 • Book and claim system participants should ensure that their disclosure of data aligns with
262 the certified characteristics of the fuel and/or services.
- 263 • Book and claim system participants should prioritize the use of actual values where
264 appropriate, utilizing default values for a baseline comparator value and when superior
265 data is unavailable, impractical, or biased. Moreover, participants should avoid selectively
266 choosing data or values that may appear more favorable or advantageous, especially if
267 actual data is available. Participants should also be transparent about the use of emission
268 factors and avoid sourcing values from multiple different emission factor sets to maintain
269 consistency.

270 9. Make system requirements and functionalities transparent

271 **Principle:**

272 Book and claim systems are transparent about their requirements and functionalities to
273 participants and the public, including the methodologies, standards, or references used to
274 calculate or reflect the attributes, the aggregated metadata of issued certificates or similar, and
275 the requirements to participate in a system.

276 **Best practices:**

- 277 • Standards that detail book and claim system requirements should be publicly accessible,
278 including any audit requirements.
- 279 • Registry functionalities and requirements should be visible in publicly accessible
280 documentation.
- 281 • Calculation methodologies should be publicly accessible.
- 282 • Any material changes to the public documentation should go through a consultation
283 process that ensures all relevant actors are included.

285 10. Accurately procure and transparently report certificates

286 **Principle:**

287 Participants of book and claim systems procure certificates that correspond to their specific
288 transport mode to mirror their organization's transportation activity, and transparently and
289 accurately use certificates in the context of complete and verified GHG emissions disclosures.

290

291 **Best Practices:**

- 292 • In the near term when clean fuels and technologies are not widely available, companies
293 can confidently invest in technologies that match their transport mode but not necessarily
294 their specific transport activity category or use case. But companies should increasingly
295 prioritize purchases that more closely match their transport activity category or use case.
- 296 • Participants should be transparent about the role of certificates in their emissions
297 disclosure.

298 **11. Collaborate to mitigate risks**

299 **Principle:**

300 Book and claim systems promote alignment with international, national, and/or industry-wide
301 standards and principles to facilitate data comparability and promote the exchange of information
302 to mitigate risks (i.e., double counting) and to facilitate reporting and accountability.

303 **Best Practices:**

- 304 • Registries should have built-in controls to ensure data integrity and accessibility. These
305 controls may be guided by internationally recognized standards, regulations on data
306 protection, and the industry's common practices, while allowing for flexibility to adapt to
307 evolving needs and emerging best practices.
- 308 • Registries should collaborate to mitigate the risk of double issuance of the same
309 certificates in any circumstance.

Glossary

Book and Claim	A chain of custody model that allows environmental attributes to be decoupled from physical products or services that would ordinarily directly carry those attributes, creating a separate certificate that allows buyers without physical access to decarbonized transportation services or fuels to financially enable the decarbonization of heavy transport and claim its benefits.
Book and Claim System	The market infrastructure (sustainability certification systems, registries, and accounting standards) that allows fuel or transport service providers to “book” the environmental attributes of a transportation product and/or service they’ve generated, creating certificates, so that customers can then “claim” the emissions benefit represented by these certificates for climate disclosures.
Principle	A fundamental statement that should apply to all book and claim systems in heavy transportation supply chains, across all transportation modes. Every credible book and claim system or piece of infrastructure should align with the listed principles to maintain its validity and integrity.
Best Practice	A recommended action or approach that stakeholders may adopt to align with its corresponding principle. The best practices provided in this document offer a snapshot of prevailing approaches today. New best practice approaches and methods will emerge and develop over time, and book and claim systems will adapt and evolve to meet those needs.
Auditor	Auditor is used throughout this document to refer to a Conformity Assessment Body, which covers both Certification Bodies and Validation/Verification Bodies. Specifically, we refer to Conformity Assessment Bodies that are independent of the organization that provides the claim, have no user interests in that claim (i.e. third-party), and are accredited to certify to a particular standard.
Environmental Attributes	Characteristics of energy sources and other activities that represent specific sustainability aspects of those sources and activities. These

attributes may include carbon intensity, GHG emissions reductions and other sustainability characteristics.

Certificate

A certificate represents the environmental attributes (including carbon intensity, GHG emissions reductions, and other sustainability characteristics that substantiate a claim) associated with a given quantity of low carbon fuel or transport service (e.g. metric ton of neat SAF or MJ of energy). For the purposes of this document, we will use the term “certificate,” though this is also commonly referred to as a BCU (book and claim unit), credit, or token.

Certification

Certification is the process of evaluating something (in this document, a supply chain’s sustainability) against a set of established criteria by an independent accredited auditor.

Sustainability Certification Schemes

Sustainability certification schemes encompass standardized frameworks or methodologies designed to evaluate and confirm the sustainability performance of products, services, or processes (referred to as environmental attributes in this document). These schemes are typically overseen by independent organizations or regulatory bodies, which accredit auditors to certify operators to their schemes.

Registry

A systematic collection of documented information or data that is organized and maintained according to specific requirements.

Double Counting

Double counting in book and claim systems refers to the erroneous, duplicate or improper accounting of emission reductions, encompassing three main scenarios: double issuance (duplicate creation of certificates for the same solution), double claiming (multiple parties claiming the same certificates), double use (repeated utilization of a single certificate by the same party for multiple purposes).

Intervention

An action taken to produce a low carbon fuel and/or transport service that leads to the creation of a certificate. A single intervention creates both scope 1 and scope 3 certificates.

Additionality

A metric for evaluating whether the emissions reductions or profile associated with an intervention (e.g. certificate purchase) would have occurred absent the intervention. In particular, regulatory additionality assesses whether the activity is already required by and used towards a regulatory obligation.

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