SAFc Registry Guide

SABA
SUSTAINABLE AVIATION BUYERS ALLIANCE

Introduction

Sustainable aviation fuels (SAF), or drop-in jet fuels made from waste and renewable feedstocks, are widely considered the best way to start decarbonizing the aviation sector today.[i] SAF is commercially available and can deliver significant emissions reductions compared to conventional jet fuel on a life-cycle basis. However, at present, it is expensive and in very short supply. Nevertheless, there is marked and growing interest among airlines, corporations, and passengers to reduce their aviation emissions by replacing conventional jet fuel with SAF. This supply-demand imbalance presents an opportunity to channel demand for SAF to stimulate an increase in supply and to reduce the price disparity with conventional jet fuel.

SAF Certificates and End-User Reduction Claims

Mobilizing demand for sustainable aviation fuels can function as a signalling incentive for new SAF production. This demand can be deployed through SAF certificates, a "book and claim" mechanism for SAF that decouples the physical fuel from its greenhouse gas emissions reductions and broader environmental attributes. SAF certificates allow airlines without physical access to SAF and corporate consumers of aviation services that may never purchase physical jet fuel to claim the environmental benefits of any given volume of SAF, which will give these consumers a business case to invest in new supply.

A SAF certificate (SAFc) represents the environmental attributes of SAF, decoupled from the physical fuel volume.[ii] It can be used to transfer reduction claims of direct (Scope 1) emissions. Thus, an airline can use certificates to reduce its direct emissions even if it does not have physical access to SAF at the airports it serves. A SAF end-user reduction claim (SERc) is the linked unit used to transfer reductions claims of indirect (Scope 3) emissions. Corporations can use SERcs to reduce their indirect emissions even if the actual flights carrying their passengers and freight do not burn SAF.

Both SAFc and SERc are denominated in metric tons of neat (unblended) SAF. SERcs are inherently and permanently connected to SAFc: they cannot be issued without a linked SAFc. However, a SAFc can be issued without an associated SERc.
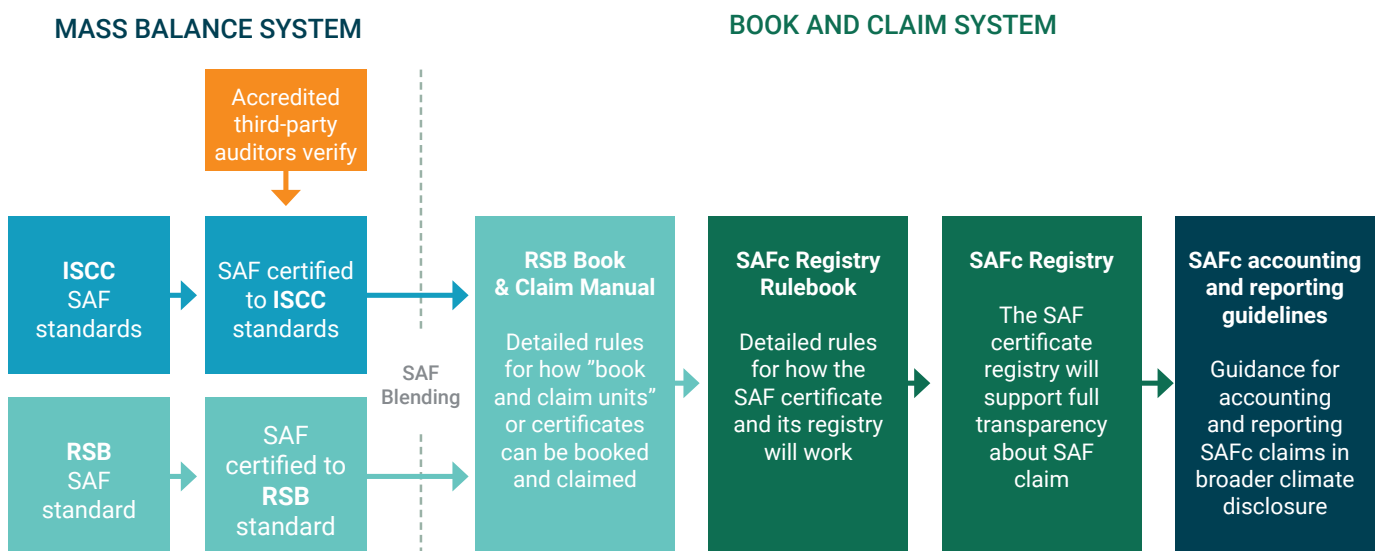
The SAFc system is built on the existing mass balance certification system defined by the Roundtable on Sustainable Biomaterials (RSB) and the International Sustainability and Carbon Certification (ISCC) system, which independently verify the sustainability criteria of SAF supply chains from feedstock production to fuel blending and delivery.[iii]

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i   This conclusion has been reached by numerous organizations, including the International Civil Aviation Organization (ICAO), International Energy Agency (IEA), and Mission Possible Partnership (MPP).

ii   A SAFc is the same as a "book and claim unit" (BCU) described in the RSB Book & Claim Manual. See **rsb.org/book-claim**

iii   See **rsb.org** and **iscc-system.org** for details.

The SAFc system built on this existing infrastructure includes:

- The *RSB Book & Claim Manual:* a standard that defines how a book and claim unit can be decoupled from a physical fuel volume and conveyed separately to avoid double counting
- The *SAFc Registry Rulebook:* detailed specifications for how SAFc can be issued, transferred, and retired in an independently governed registry
- The **SAFc registry:** an IT system designed to streamline, verify, and make transparent the issuance, transfer, and retirement of SAFc
- **SAFc accounting and reporting guidelines:** guidance to support users of SAFc in emissions accounting and reporting[iv]

Exhibit 1: Diagram of the SAFc System

MASS BALANCE SYSTEM   **BOOK AND CLAIM SYSTEM**

Accredited third-party auditors verify

| ISCC SAF standards | SAF certified to ISCC standards |
| RSB SAF standard | SAF certified to RSB standard |

SAF Blending

RSB Book & Claim Manual — Detailed rules for how "book and claim units" or certificates can be booked and claimed

SAFc Registry Rulebook — Detailed rules for how the SAF certificate and its registry will work

SAFc Registry — The SAF certificate registry will support full transparency about SAF claim

SAFc accounting and reporting guidelines — Guidance for accounting and reporting SAFc claims in broader climate disclosure

Aim of the SAFc Registry

The SAFc system will be effective in scaling SAF production only if users and civil society have confidence in and visibility into the process: how certificates work, what they represent, and how the system is governed to ensure its long-term credibility. The aim of the SAFc Registry is to create the consistency, transparency, and auditability of SAF certificates to generate this crucial trust, scale SAFc uptake, and ultimately create a strong demand signal for new SAF supply at scale.

The registry's functional specifications are detailed in the SAFc Registry Rulebook, which is intended to conform with the requirements of the RSB Book & Claim Manual. The rulebook was developed by RMI and the Environmental Defense Fund in consultation with RSB, members of the Sustainable Aviation Buyers Alliance (SABA), the Clean Skies for Tomorrow coalition (CST), a consultative group of fuel providers, and other stakeholders. A draft version of the rulebook is now under public consultation for review and feedback.[v]

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iv   Clean Skies for Tomorrow released **SAFc Accounting and Reporting Guidelines** in October 2022 to guide SAFc users in climate disclosure absent formal guidance from GHGP and SBTi.

v   The rulebook is under public consultation until January 31, 2023. **Please submit feedback here.**

Scope and Principles

The registry is designed primarily to stimulate and clarify the voluntary SAF market — SAF claimed for use toward voluntary climate targets — but it also enables SAFc retirements for compliance purposes. Its intention is to foster the use of SAF that generates emissions reductions surpassing those already required by regulatory schemes. This ensures the attainment of real atmospheric benefits — that is, emissions reductions that would not have occurred absent voluntary market intervention. Further, the registry follows accounting rules that prevent double counting and double claiming of emissions reductions.

The principles that guide the registry processes draw from the RSB Book & Claim Manual, the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and other sustainability certification schemes held by RSB and ISCC, the Science Based Targets initiative (SBTi) aviation sector guidance, and SABA's SAF Sustainability Framework.[vi] These standards and guidance documents were developed to propel production and use of SAF with environmental integrity, and they include provisions on certifications, emissions reduction thresholds, life-cycle assessment methods, and prevention of double counting. The rulebook draws on these features to detail functional specifications of the registry.

How It Will Work

The registry will enable units to be issued, transferred, and retired — meaning that units can be created, moved among accounts, and claimed as part of emissions disclosures, respectively.

All units in the registry will represent the environmental attributes of one metric ton of neat SAF, but they will vary based on the sustainability elements of the underlying SAF. The key elements are certification type, life-cycle greenhouse gas emissions reductions, use for compliance or voluntary reporting, and status of the post-issuance audit of the SAF supply chain.

Three tiers of SAF sustainability criteria will initially be recognized in the registry:

- SCS Eligible applies to SAF from a supply chain certified to a sustainability certification scheme (SCS) held by a recognized standard holder, namely RSB or ISCC.
- SABA Eligible applies to SAF that satisfies the minimum requirements outlined in the SABA SAF Sustainability Framework.[vii]
- SABA Preferred applies to SAF for which a provider has taken additional measures (beyond those already inherent in SABA Eligible) to reduce risks of indirect land use change and displacement effects.

In time, other categories will be considered for inclusion in the registry.

Users and Accounts

The registry will serve four primary user types: fuel providers (producers and suppliers), air transport providers, freight
The registry will serve four primary user types: fuel providers (producers and suppliers), air transport providers, freight forwarders, and corporate customers and the general public. Each of these users can open accounts, which will be designed for their specific needs and roles (see Exhibit 2 below). Only fuel provider holding accounts will be able to request issuance of SAFc. These accounts can also hold and transfer SAFc or SERC units, but they cannot retire them. Air transport providers, freight forwarders, and corporate customers and the general public can hold, acquire, transfer, and retire both registry units. All account types can request issuance of SERCs.

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vi   **RSB**, **ISCC**, the **SBTi Aviation Sector Guidance** and the **SABA Sustainability Framework for SAF** define sustainability criteria which the SAFc registry will leverage to highlight applicable use cases for SAFc and SERc.

vii   **SABA's sustainability framework** describes two tiers of SAF sustainability criteria: SABA eligible and SABA preferred. The SABA eligible tier is largely consistent with the SBTi aviation sector guidance requirements for SAF, and it aligns with SBTi's recommended — as opposed to minimum — emissions reduction threshold of 60% relative to conventional jet fuel.
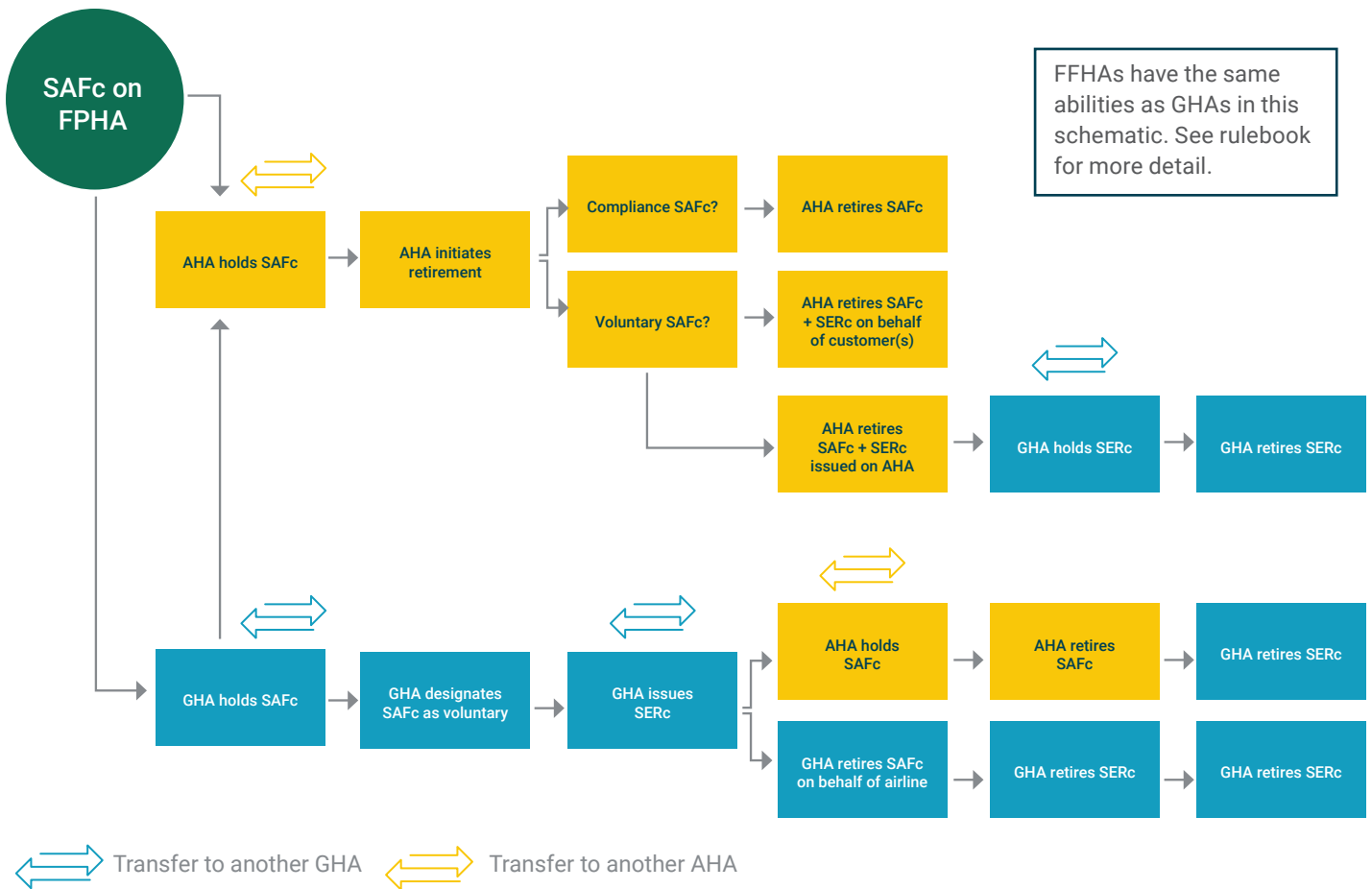
User type	Account type name	Request issuance of SAFc?	Request issuance of SERc?	Hold and transfer SAFc and SERc?	Retire SAFc and SERc?
Fuel providers	Fuel provider holding account (FPHA)	Yes	Yes	Yes	No
Air transport providers	Air transport provider holding account (AHA)	No	Yes	Yes	Yes
Freight forwarders	Freight forwarder holding account (FFHA)	No	Yes	Yes	Yes
Corporate customers and the general public	General holding account (GHA)	No	Yes	Yes	Yes

Unit Actions

A SAFc can be issued after blending of the linked neat SAF with conventional jet fuel or after ASTM[viii] certification to an equivalent non-blending standard. SAF certificates and any associated SERcs can then be transferred among accounts and retired.

Exhibit 3: Transfer of SAFc and SERc Units

FFHAs have the same abilities as GHAs in this schematic. See rulebook for more detail.

Transfer to another GHA   Transfer to another AHA

viii   **ASTM** is an international standards organization that defines chemical standards for SAF, among several thousand other standards.
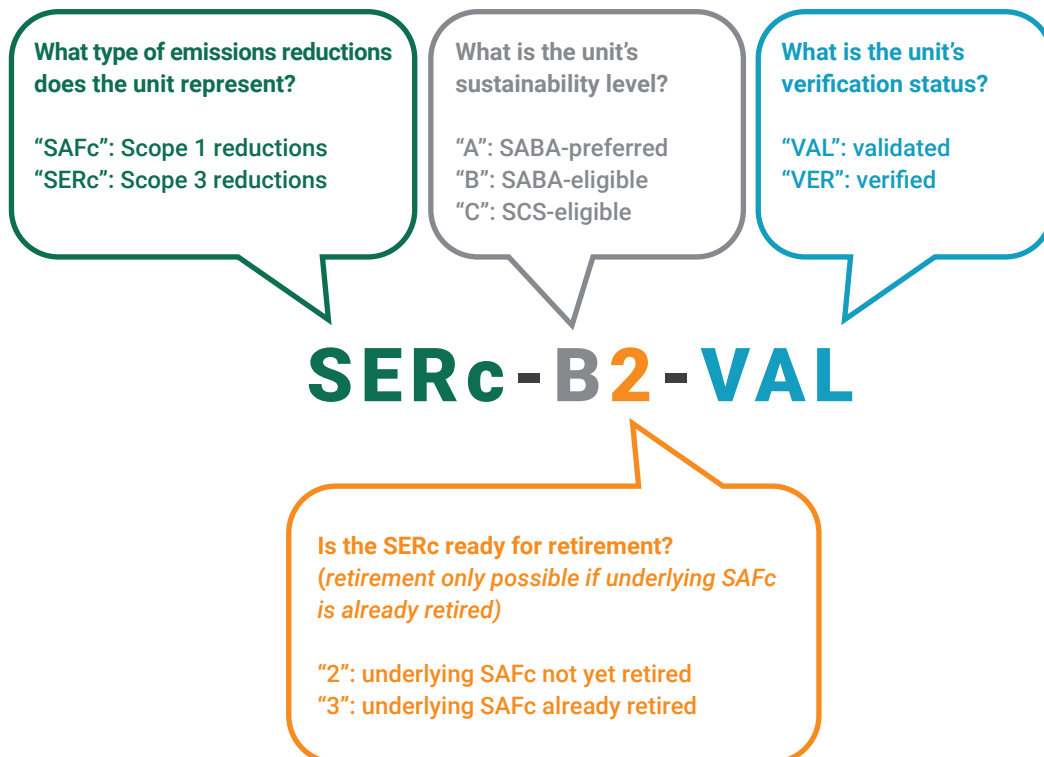
Sustainability Certifications and Audits

The registry will only issue a SAFc or SERc if:

1. they are linked to SAF produced by an SCS-certified supply chain — that is, the producer has a valid sustainability certification issued under an SCS held by RSB or ISCC; and

2. the SAF is in the ownership of a fuel provider account holder with a valid RSB trader certificate.

Information related to certification and surveillance audits (i.e., recertification) of the SAF supply chain will accompany every SAFc and SERc. All SAFc will be tagged as "validated" (VAL) at their creation. This indicates that environmental attributes of the SAF production and supply process were independently certified in the period before the unit was created, issuance occurred while the issuer's certification was valid, and the detail of the certification is in line with information shown on the registry. Units for which environmental attributes of the underlying SAF production and supply have been independently certified after their issuance will bear a tag of "verified" (VER).

To implement this design, independent certification bodies (i.e., auditors) will be an integral part of the registry as an extension of the services these organizations already provide to assess the compliance of producers and supply chain operators with SAF sustainability certifications.

Exhibit 4: Sample unit ID

What type of emissions reductions does the unit represent?

"SAFc": Scope 1 reductions
"SERc": Scope 3 reductions

What is the unit's sustainability level?

"A": SABA-preferred
"B": SABA-eligible
"C": SCS-eligible

What is the unit's verification status?

"VAL": validated
"VER": verified

SERc-B2-VAL

Is the SERc ready for retirement?
(retirement only possible if underlying SAFc is already retired)

"2": underlying SAFc not yet retired
"3": underlying SAFc already retired

Registry Administration and Data Management

Energy Web[ix] will be responsible for registry development and administration, supported by the Registry Governance Board. The Board will include members from a comprehensive range of key stakeholders.

The registry will house both public and confidential information. It will showcase some key data in a publicly available database that provides information on issued and retired units, as well as the entities that retired them. The registry will also include tables that trace registered SAFc and SERc units to the sustainability characteristics of their associated SAF and include information on entities holding valid certifications with applicable SCSs. The registry will be designed to protect user data and maximize online availability.

Conclusion

The SAFc Registry can enhance trust in SAFc as a mechanism to reliably claim aviation sector emissions reductions. It can promote SAF uptake by airlines and corporations and help drive demand in its production and supply.
We need your feedback to make the SAFc Registry work and best serve the SAF market by participating in the public consultation process for the SAFc Registry Rulebook. You can find the rulebook and consultation survey here. Feedback submissions are due on January 31st, 2023.

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ix   **Energy Web** is a nonprofit software developer that has been selected to develop and administer the SAFc registry.