

Sustainability Framework for Sustainable Aviation Fuel (SAF)

Version 4 Draft, July 2026

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Recitals and Context

The purpose of the SABA Sustainability Framework for SAF (the “Framework”) is to determine the types of SAF that advance SABA’s objective of driving production and use of SAF with high environmental integrity. The Framework is intended to guide SAF procurement decisions and emissions reduction claims, particularly from aviation customers.

The Framework is based on the [International Civil Aviation Organization \(ICAO\) framework for SAF](#) developed for the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).¹ In addition to the CORSIA framework, this Framework integrates provisions intended to reflect the decarbonization ambitions of SABA’s members and align with other carbon reduction programs, such as the Science Based Targets Initiative (SBTi).

The additional provisions are listed below, with the first 4 sections pertaining to physical properties of the SAF and the last 3 sections focusing on the handling and claiming of the associated SAF certificates (SAFc):

1. Sustainability Certifications
2. Lifecycle Assessment Approach
3. Emissions Reduction Threshold
4. Feedstock Eligibility Criteria
5. Regulatory Surplus Additionality Standard
6. Preventing Double Claiming
7. Emission Reduction Claims with SABA Eligible Registries

Recognizing the dynamic nature of the SAF market, the Framework takes a flexible but rigorous approach to defining high integrity SAF. It establishes a set of **“SABA Eligible”** requirements to ensure that SAF meeting these requirements represent real and significant environmental benefits relative to fossil-based jet fuel, and align with the latest guidance from the Science Based Targets Initiative. At the same time, where appropriate, the Framework describes additional provisions that qualify a fuel as **“SABA Advanced,”** which requires additional criteria to mitigate risks of Indirect Land Use Change (ILUC) and displacement effects.

All SAFc procured through SABA will be required to meet the SABA Eligible requirements. Select procurements may also require meeting the SABA Advanced requirements.

SABA intends to update the Framework at least every two years as the market changes, new information about the environmental impact of fuels emerges, and experience with different certification systems and methodologies grows. The SABA Advanced provisions in this version of the Framework may become SABA Eligible requirements in future versions.

SAF is the most promising near-term option for decarbonizing the aviation sector. However, like all energy technologies, SAF presents tradeoffs that need to be understood and managed. This Framework represents a pragmatic but ambitious approach to identifying high integrity SAF available today, while driving the market to continue to innovate towards even higher-quality SAF in the future.

The criteria in this Framework apply equally to SAF produced at dedicated SAF production facilities and via co-processing.

0. Summary of Requirements

The table and descriptions below summarize the **SABA Eligible** and **SABA Advanced** requirements for SAF and associated SAFc across each category. The remainder of this document provides additional detail, including definitions, eligibility criteria, and the rationale for each requirement.

SABA Eligible SAF Requirements

Category	Requirements
1. Certification	SAF must receive one of the following certifications: 1. SAF produced from non-land-based feedstocks: RSB CORSIA, ISCC CORSIA, RSB EU, ISCC EU, RSB Global, or ISCC Plus 2. SAF produced from land-use-based feedstocks: a. RSB CORSIA or ISCC CORSIA OR b. RSB EU, ISCC EU, RSB Global or ISCC Plus AND a low-ILUC add-on certification from RSB or ISCC
2. LCA Approach	1. Avoided emissions included in the SAF certification's LCA but occur outside of the SAF value chain must be subtracted, including landfill emissions credits (LECs), recycling emissions credits (RECs), soil carbon sequestration, and avoided emissions from renewable natural gas (RNG) 2. SAF LCA values cannot go below 0 3. SAF produced using CCS must demonstrate that feedstock is not associated with high ILUC risk
3. Emission Reduction Threshold	The LCA for SAF – after considering any adjustments as required by this Framework – must be at least 60% lower than the lifecycle emissions of fossil jet fuel
4. Feedstock Eligibility	SAF cannot be produced from palm oil or its derivatives, including palm fatty acid distillate (PFAD)
5. Additionality	A SAF certificate must represent emissions benefits that exceed regulatory requirements that are placed on the SAFc supplier or another entity in its immediate supply chain
6. Preventing Double Claiming	Air transport providers must not assign the same emissions reductions from SAFc to more than one entity for the same value chain step
7. Registries	All SAF certificates must be registered in the SAFc Registry or another SABA Eligible Registry

SABA Advanced Requirements

To achieve SABA Advanced status, SAF must meet all the SABA Eligible requirements listed above plus the below SABA Advanced requirements based on the feedstock and production pathway:

- 1) Non-PtL SAF must either:
 - a) Receive one main and one add-on certification from the below lists:
 - i) Produced from non-land-based feedstocks:
 - (1) *Main certification*: RSB/ISCC CORSIA, RSB/ISCC EU, RSB Global, or ISCC Plus
 - (2) *Add-on certification*: RSB low ILUC or displacement risk
 - ii) Produced from land-based feedstocks:
 - (1) *Main certification*: RSB /ISCC CORSIA
 - (2) *Add-on certification*: RSB or ISCC low-ILUC risk
 - OR
 - b) Use feedstocks that meet the following requirements:
 - i) Have a [CORSIA Default ILUC LCA Value](#) ≤0; **AND**
 - ii) Be included on *Annex IX Part A* in [EU RED II](#) (or its [2024 Amendment](#)) **AND**
 - iii) Not be produced from energy crops
- 2) PtL SAF must receive one of the following certifications: RSB CORSIA, ISCC CORSIA, RSB EU, ISCC EU, RSB Global, ISCC Plus, or ISCC Plus w/ 45Z or 45V tax forms

1. Sustainability Certifications

This section defines acceptable certifications for various SAF feedstocks and production pathways, ensuring that key risks, such as direct and indirect land use change, as well as feedstock and electricity displacement, are effectively mitigated.

SABA Eligible Requirement: SAF must be certified by a [CORSIA-approved sustainability certification scheme](#) (SCS) that complies with ICAO’s full set of [sustainability criteria](#). Currently, RSB and ISCC are deemed CORSIA eligible SCSs. The specific certificates allowed will depend on the SAF feedstock and production pathway, as detailed in the rest of this section.

Rationale: CORSIA-approved SCSs that require ICAO’s sustainability criteria are well-known in the industry to be credible frameworks in verifying and documenting sustainability qualities of SAF. The sustainability criteria approved by the [ICAO Council](#) include provisions for: greenhouse gases, carbon stock, water, soil, air, conservation, waste and chemicals, human and labor rights, land use rights and land use, water use rights, local and social development, and food security.

a. Certification of SAF produced from non-land-based feedstocks

This sub-section defines acceptable certifications for SAF produced using feedstocks that are either categorized as wastes, residues, or byproducts by CORSIAⁱⁱ or included on EU RED Annex IX, hereafter referred to as non-land-based feedstocks.

SABA Eligible

Requirement: SAF produced from non-land-based feedstocks must receive one of the following certifications: [RSB CORSIA](#), [ISCC CORSIA](#), [RSB EU](#), [ISCC EU](#), [RSB Global](#), [ISCC Plus](#).

Rationale: Because these feedstocks are not intentionally produced as a primary product, they do not increase land use and are assigned zero ILUC emissions by ICAO. This inherent low risk allows any of the six listed certifications to effectively validate the sustainability of the resulting SAF.

SABA Advanced

Requirement: In addition to the SABA Eligible certification requirements, to achieve the SABA Advanced Tier, SAF produced from non-land-based feedstocks must also demonstrate low displacement emissions risk through either:

- i. Reporting that the feedstock meets the requirements of the [RSB Low ILUC Risk Biomass Module](#) (category “Waste and Residues”) OR
- ii. Following [RSB’s Voluntary add-on Methodology for Displacement Effects](#) and including the estimated displacement emissions in the LCA (per the requirement in Section 2d)

SAF that receives one of the SABA Advanced certifications outlined in this Section 1a do NOT need to meet the SABA Advanced feedstock requirements in Section 4 to achieve SABA Advanced status.

Rationale: Even though non-land-based feedstocks are considered to inherently have minimal ILUC emissions, there is still potential for increased emissions if their use towards SAF displaces their existing applications in other sectors. In such cases, those applications may be met with alternative feedstocks or energy sources that have an emissions impact, resulting in “displacement” emissions. Feedstocks that meet the requirements of RSB’s Low ILUC Risk Biomass Module are considered to have low displacement effects in the regions where they are generated. For feedstocks that don’t meet the requirements of that module, applying RSB’s voluntary add-on methodology for displacement effects is an alternate guardrail to quantify those displacement emissions.

b. Certification of SAF produced from land-based feedstocks

This sub-section defines acceptable certifications for SAF produced using feedstocks NOT categorized as wastes, residues, or byproducts by CORSIA, which will be referred to as land-based feedstocks.

SABA Eligible

Requirement: SAF produced from land-based feedstocks must receive either RSB CORSIA or ISCC CORSIA certification. SAF produced from land-based feedstocks may also receive RSB Global, RSB EU, ISCC Plus or ISCC EU, as long as it also achieves one of the following add-on certificationsⁱⁱⁱ: [RSB Low ILUC Risk](#), [ISCC EU Low ILUC Risk](#), [ISCC Plus Low LUC Risk](#), [ISCC CORSIA Low LUC Risk](#).

Rationale: SAF produced from land-based feedstocks must be carefully evaluated for ILUC emissions risk as their production has potential to drive additional land demand. CORSIA certification requires inclusion of ILUC emissions through default or actual LCA values. This, coupled with SABA's 60% emission reduction threshold (see Section 2), appropriately address ILUC risk from land-based feedstocks. The other acceptable primary certifications do not include default ILUC values and must therefore be paired with additional certifications to ensure SABA's 60% emission reduction threshold can be met, inclusive of ILUC impacts. These additional certifications align with [ICAO's Low LUC Risk Practices methodology](#), which provides additional steps to assess and quantify ILUC risk.

SABA Advanced

SABA Advanced Requirement: SAF produced from land-based feedstocks must receive either RSB CORSIA or ISCC CORSIA certification **AND** receive one of the following add-on certifications^{iv}: [RSB Low ILUC Risk](#), [ISCC EU Low ILUC Risk](#), [ISCC Plus Low LUC Risk](#), [ISCC CORSIA Low LUC Risk](#). SAF that receives the certifications outlined in this section 1b do **NOT** need to meet the feedstock criteria specified in Section 4 to achieve SABA Advanced status.

Rationale: The Framework's 60% emission reduction threshold, when paired with CORSIA certifications that require inclusion of default ILUC values within the fuel's LCA provides strong protection against ILUC risk, but does not completely eliminate it. By layering in the additional ILUC certifications, ILUC risk can be further mitigated.

c. Certification of SAF produced via the Power-to-Liquid (PtL) pathway

This sub-section defines acceptable certifications for SAF produced via the PtL pathway. Though PtL SAF could also fall under Section 1a or 1b, the higher electricity demand required for PtL necessitates the use of certifications that have guardrails for electricity use.

SABA Advanced

Requirement: SAF produced via the PtL pathway must receive one of the following certifications: RSB CORSIA, ISCC CORSIA, RSB EU, ISCC EU^v, RSB Global, ISCC PLUS^{vi}, or ISCC PLUS w/ [IRS form 7210](#) or [IRS form 7218](#) & associated verification report.

Rationale: When implemented with robust guardrails, PtL-based SAF presents inherently low risks of ILUC and displacement, as it relies on hydrogen and CO₂ as primary feedstocks. SABA has not identified any PtL certification pathways that meet the objectives of the SABA Eligible Tier without also satisfying the additional ILUC and displacement mitigation requirements of the SABA Advanced Tier. Accordingly, the Framework classifies qualifying PtL as SABA Advanced.

RSB CORSIA, ISCC CORSIA, RSB EU, ISCC EU, and RSB Global all require robust electricity safeguards, including temporal matching, geography matching, additionality, and deliverability requirements. ISCC PLUS does not include all electricity safeguards on its own, but when coupled with the GHG add-on that has the same LCA methodology as ISCC EU, the electricity guardrails

are effectively incorporated. These certifications also include guardrails for the use of industrial CO₂, including prohibitions of any industrial CO₂ that is deliberately produced for fuel production.

SABA supports the use of RECs or other EACs that align with the US 45V and 45Z 'Three Pillars' (additionality, temporality, and geographic matching) electricity requirements as PtL technology matures, which is allowed under ISCC PLUS certification. However, because ISCC PLUS follows the EU LCA methodology, RECs are not recognized in the LCA, even if they meet 45V/45Z guardrails. To bridge this, ISCC PLUS with IRS Forms 7210 or 7218 has been added as an option for SAF produced under 45V and/or 45Z, allowing for the use of the corresponding SAF carbon intensity values calculated using the GREET model.

d. Accepted Certifications Summary

This sub-section summarizes the certifications required for different production pathways. For simplicity, some certification titles have been shortened.

Tier	SAF produced from non-land-based feedstocks	SAF produced from land-use feedstocks	SAF produced via PtL pathway
SABA Eligible	RSB CORSIA, ISCC CORSIA, RSB EU, ISCC EU, RSB Global, or ISCC Plus	1. RSB CORSIA or ISCC CORSIA OR 2. RSB EU, ISCC EU, RSB Global, or ISCC Plus AND A low-ILUC add on certification from RSB or ISCC	
SABA Advanced	RSB CORSIA, ISCC CORSIA, RSB EU, ISCC EU, RSB Global, or ISCC Plus AND RSB low ILUC or RSB displacement add on certification*	RSB CORSIA or ISCC CORSIA AND A low-ILUC add on certification from RSB or ISCC	RSB CORSIA, ISCC CORSIA, RSB EU, ISCC EU, RSB Global, ISCC Plus, or ISCC Plus w/ 45V or 45Z tax forms

*Add on certification not needed to achieve SABA Advanced status if using feedstock that complies with the criteria in Section 4

2. Lifecycle Assessment Approach

Section 1 specifies the allowable certification schemes that broadly define acceptable LCA approaches for SABA Eligible fuels. This Section 2 includes rationale for any amendments to those methodologies.

SABA Eligible Requirement: The SAF carbon intensity must be calculated using a robust, well-to-wake LCA approach, as required by all certifications listed in Section 2.

Rationale: A robust LCA approach ensures that all greenhouse gas (GHG) emissions along the SAF supply chain are accounted for – from production to final use. The LCA approach includes direct emissions (e.g., emissions from operating the refinery where the fuel is produced) and indirect emissions (e.g., emissions that occur because feedstock cultivation for energy may displace food and feed crops, resulting in new lands deforested and converted to produce food). CORSIA-approved SCSs, as required in Section 1, adequately use LCA approaches to calculate emissions. RSB CORSIA and ISCC CORSIA also consider ILUC emissions from fuel production. Separate ILUC protections are built into Sections 1a, 1b, and 2b as needed for SAF that achieves certification outside the CORSIA framework (RSB EU, ISCC EU, RSB Global, or ISCC Plus).

a. Avoided Emissions and Removals

This sub-section applies to SAF with avoided emissions or removals included in its certification's LCA.

SABA Eligible Requirement: Only avoided emissions and removals that occur within the SAF value chain can be counted toward the SAF lifecycle carbon intensity value, consistent with SBTi's guidance. Any avoided emissions that are included in the SAF certification's LCA must be subtracted from the final carbon intensity score.

Rationale: Under ICAO's CORSIA, LCA values may include avoided emissions and removals from activities associated with SAF production even when they are not directly part of the SAF value chain. This approach is accepted under ICAO because aircraft operators can comply using either offsets (avoided emissions are offset project types) or emissions reductions from SAF. SABA's mission, however, is to drive in-sector decarbonization of aviation. Thus, it is important that SABA's approach drives uptake of SAF based on the emission reductions embodied in the fuel itself. This general approach is aligned with SBTi. Elaboration on a few cases is provided in Sections 2ai, 2aii, and 2aiii.

i. [Municipal solid waste \(MSW\) feedstocks](#)

This sub-section applies to SAF produced using municipal solid waste as a SAF feedstock.

SABA Eligible Requirement: Landfill emissions credits (LECs) and Recycling Emissions Credits (RECs) cannot be counted toward the fuel's LCA value.

Rationale: When MSW is used for SAF production, materials such as aluminum cans are diverted from landfill in the process. They can then be recycled and used in other industries instead of new aluminum, leading to avoided emissions. Under ICAO's CORSIA, this process would generate a "Recycling Emissions Credit" and fuel producers could subtract the corresponding emissions reductions from the lifecycle value of the SAF. The fact that another industry can use the recycled aluminum is an associated benefit of SAF production, but that process is not part of the SAF supply chain. This means those avoided emissions do not represent a direct reduction in aviation emissions and would not count towards a Science Based Target.

ii. [Land-use based feedstocks with soil carbon sequestration](#)

This sub-section applies to SAF that includes soil carbon sequestration emissions savings in the LCA.

SABA Eligible Requirement: Soil carbon sequestration emission savings cannot count toward the fuel's LCA value if the GHG calculation method used actual rather than default LCA values.

Rationale: There is debate over whether soil carbon sequestration occurs within or outside the SAF value chain. SABA has decided against counting these toward SAF carbon intensity values in the calculation of actual LCA emissions given this debate *as well as* additional concerns regarding permanence, leakage, and inconsistent methodologies for crediting soil carbon sequestration.

iii. [Avoided emissions associated with biogas or renewable natural gas](#)

This sub-section applies to SAF produced using biogas or renewable natural gas as a SAF feedstock or energy input.

SABA Eligible Requirement: Avoided emissions from biogas or renewable natural gas used as a SAF feedstock or energy input cannot count toward the fuel's LCA value.

Rationale: Integrating biomethane, including biogas and renewable natural gas, into the SAF value chain is advantageous, as the CO₂ released during its use is of biogenic origin. An additional benefit of consuming these fuels is the avoided emissions associated with the prevention of releasing methane directly to the atmosphere, which has a significantly higher global warming potential than the CO₂ released through its combustion. However, there is debate over whether avoided emissions from methane used as a SAF feedstock or energy input occurs within or outside the SAF value chain.

Consistent with SBTi guidance, SABA has decided against counting these toward SAF carbon intensity values in the calculation of actual LCA emissions given this debate *as well as* significant additional debate about how to accurately account for these avoided emissions.

b. Crediting negative LCA values

SABA Eligible Requirement: SAF LCA values cannot go below 0.

Rationale: In-sector removals can result in negative LCA values, such as when carbon captured at a processing unit in the SAF supply chain exceeds all other GHG emissions associated with the SAF lifecycle. An example of this would be a SAF production facility using carbon capture, where some of the captured biogenic carbon is stored underground (also referred to as bio-energy with CCS, or BECCS). SBTi does not allow below-zero LCA values to contribute towards the achievement of science-based targets (SBTs) validated under SBTi. SABA seeks to maintain alignment with SBTi to support its member companies in achieving their SBTs.

c. Mitigating ILUC risk with Carbon Capture and Sequestration (CCS)

This section applies to SAF production involving carbon captured at a processing unit in the SAF supply chain and sequestration of the captured CO₂ in a viable geological formation.

SABA Eligible Requirement: Fuel providers employing CCS must demonstrate that their feedstock is not associated with high ILUC risk by complying with *at least one* of the following:

- i. Achieve SABA's 60% emission reduction threshold without CCS reductions included in the LCA value, **OR**
- ii. Ensure the feedstock used for SAF production carries a 0 default CORSIA ILUC value, **OR**
- iii. Have a certification from a CORSIA-approved SCS that attests to compliance with criteria to demonstrate that a feedstock or product has minimal ILUC risk. Currently, the RSB Low ILUC Risk Biomass Module and the ISCC Low LUC risk certifications satisfy this requirement.

Rationale: When CCS is applied to carbon captured along the SAF production supply chain, the resulting emission reductions can be considered part of the SAF supply chain and therefore counted toward the LCA value up to a point (see Section 2b). As described in the introduction to Section 2, SABA's 60% emissions reduction threshold is set as an additional safeguard against ILUC risk associated with SAF production. However, because CCS can have a significant impact on the LCA values, processes using feedstocks with high ILUC values may still meet the SABA LCA threshold when CCS is applied. Since CCS does not compensate for other environmental and social risks related to ILUC, SABA requires fuel producers using CCS to comply with at least one of the measures in 2c to ensure that their SAF is not associated with meaningful ILUC risk.

d. Inclusion of displacement emissions

This sub-section applies to non-land-based feedstocks seeking SABA Advanced status that were required to follow RSB's Voluntary add-on Methodology for Displacement Effects per Section 1a.

SABA Advanced Requirement: Any displacement emissions identified per RSB's Voluntary add-on Methodology for Displacement Effects must be added to the SAF LCA.

Rationale: As noted in Certification Section 1a, non-land-based feedstocks have potential for causing displacement emissions if their use towards SAF displaces their existing applications in other sectors, and are replaced by other emitting alternatives. Following RSB's Voluntary add-on Methodology for Displacement Effects and inclusion of any displacement emissions in the LCA ensures that even

when accounting for displacement emissions, the SAF still represent real and significant emissions reductions by achieving at least a 60% carbon intensity reduction as required in Section 3.

3. Emissions Reduction Threshold

This section specifies the carbon intensity reduction requirements for SABA Eligible SAF.

SABA Eligible Requirement: The LCA for SAF – after considering any adjustments as required by this Framework – must be at least 60%^{vii} lower than the lifecycle emissions of fossil jet fuel^{viii} as indicated in the SAF’s sustainability certification documentation (i.e. the Proof of Sustainability).

Rationale: ICAO requires a 10% minimum emissions reduction for SAF, which is intended as a safeguard to ensure that any emission reduction claim in CORSIA is backed up with real emissions reductions that go beyond the uncertainties associated with the LCA methodology. SABA’s goal is to accelerate the transition to net zero aviation, so a higher threshold is appropriate. The 60% target is technically achievable and directionally aligned with SBTi’s target-setting guidance for the aviation sector.

4. Feedstock Eligibility Criteria

This section specifies additional feedstock requirements and restrictions not already accounted for in previous sections.

SABA Eligible

Requirement: SAF cannot be produced from palm oil or its derivatives, including palm fatty acid distillate (PFAD).

Rationale: The production of palm oil and its by-products involve serious environmental risks for which sufficient solutions have not been identified.

SABA Advanced

Requirement: Feedstocks used to produce SAF must meet the following requirements:

- a. Have a [CORSIA Default ILUC LCA Value](#)^{ix} ≤0; **AND**
- b. Be included on *Annex IX Part A: Feedstocks used for the production of biogas for transport and advanced biofuels* in [EU RED II](#) or its [2024 Amendment](#) **AND**
- c. Not be produced from energy crops^x

At the time of Framework publishing, examples of feedstocks that meet all three of these criteria include agriculture residues, forestry residues, and municipal solid waste.

SAF produced using feedstock that meet the criteria outlined in this Section 4 will not need to receive the certifications outlined in Sections 1.a and 1.b to achieve SABA Advanced status.

SAF produced via the PtL pathway and receiving the certifications outlined in Section 1 do not need to meet the criteria outlined in this Section 4. This is because CORSIA does not have default values for the typical PtL feedstocks of CO₂ and hydrogen.

Rationale: Feedstocks with default CORSIA ILUC LCA values of ≤0 are considered to have low ILUC risk as they either contribute minimally to global agriculture land expansion or deliver net increases in land carbon stocks. Feedstocks included on RED II’s Annex IX Part A are considered to have low displacement risks, as they consist of wastes and residues with minimal economic value and are therefore unlikely to drive use of alternative pathways with higher emissions. However, even though energy crop feedstocks are included on EU RED II’s Annex IX Part A, they will not

automatically qualify as SABA Advanced because these feedstocks can pose displacement risks^{xi}. SAF produced via these feedstocks can still be SABA Advanced if certified per the options described in Sections 1a and 1b.

5 Additionality: Regulatory Surplus

This section details the requirements for SAF to demonstrate additionality via regulatory surplus.

SABA Eligible Requirement: A SAF certificate must represent emissions benefits that exceed regulatory requirements that are placed on the SAFc supplier or another entity in its immediate supply chain. Regulatory requirements include the following:

- a. Actions that are mandated (e.g., mandate to supply or use SAF)
- b. Actions that produce emissions reductions that are mandated (e.g., requirement to reduce GHG emissions)
- c. Actions covered by a regulatory system that mandates the creation of compliance units from such action

Regulatory requirements do not include the following:

- a. Actions or credits that are designated for voluntary use
- b. Actions or credits that represent emissions outcomes that exceed required levels (as described in the next paragraph)
- c. Actions that generate monetary incentives, and do not include a requirement for participation
- d. Actions that put a price on emissions but do not set an emissions reduction requirement specific to a SAFc issuer or an entity in its immediate supply chain.

Emissions reductions associated with SAF certificates are considered to demonstrate regulatory surplus if they meet either of the following conditions:

- a. No regulatory requirement applies: Neither the SAFc supplier nor any entity in the supplier's immediate physical supply chain is subject to regulatory requirements that mandate SAF use, emissions reductions, or the generation or retirement of regulatory compliance units that represent emissions reductions.
- b. Emissions outcomes exceed applicable regulatory requirements: Where the SAF supplier or an entity in the supplier's immediate supply chain is subject to relevant regulatory requirements, the emissions reductions associated with the SAF certificates must go beyond what is required for compliance.
 - i. *Exceeding mandated actions or outcomes* – Where a regulation mandates a specific action or a minimum level of emissions reduction, only the portion of actions or emissions reductions that exceeds the applicable requirement is considered to demonstrate regulatory surplus.
 - Surplus credits under a regulatory credit system* – Where a regulation establishes a credit system, credits generated but not used by the regulated entity to meet its own compliance obligation are considered regulatory surplus. Regulated entities can sell credits representing this surplus to other obligated parties.

Rationale: SABA's mission is to accelerate the path to net zero air transport by driving investment in high integrity SAF. SAF being used to generate voluntary SAFc must generate emissions benefits beyond those already required by regulation for a SAFc supplier or its immediate supply chain. This ensures they create regulatory surplus, meaning they generate an emissions reduction beyond their existing regulatory requirements. This approach is aligned with the Advanced and Indirect Mitigation (AIM) Platform, a cross-sector, multi-stakeholder initiative that developed auditable standards and recommendations for the use of Market Instruments, with the aim of informing GHGp and SBTi revisions.

See Appendix Section 9c for examples of when SAF does and does not meet Regulatory Surplus for specific regulations.

5. Preventing Double Claiming

This section describes double claiming of SAF certificates and how to prevent it.

SABA Eligible Requirement: To prevent double claiming between organizations when reporting publicly or bilaterally, air transport providers must not assign the same emissions reductions from SAFc to more than one entity for the same value chain step. As an example, an air transport provider must not assign the same emission reductions from SAFc sold specifically to one customer (e.g., when a customer purchases a Scope 3 certificate from an airline) to their general pool of customers.

This requirement can be operationalized through inclusion of language that prohibits double claiming in the SAFc purchasing contract.

Rationale: Both air transport providers as well as other entities in the aviation value chain can claim emission reductions for SAF towards their respective climate goals. Accounting rules help ensure the integrity of emissions reduction claims. This includes the avoidance of double counting and within it, double claiming. There is double claiming when the same emissions reductions from the use of SAF are claimed twice towards the same functional step within the value chain.

Consider Air transport provider A who purchases 10 tCO₂e of SAF, sells 4 tCO₂e of SAFc to Business Travel Customer B, and applies the remaining 6 tCO₂e toward its own general emissions factors shared with all business travel customers. Because the 4 tCO₂e sold are excluded from the general pool shared with other customers, no double claiming occurs. However, if the airline applied the full 10 tCO₂e reduction to the emissions factors shared with all customers, both Customer B and the general customer base would be claiming the same 4 tCO₂e reduction, which would constitute double claiming.

6. Emission Reduction Claims with SABA Eligible Registries

This section defines acceptable registries to use for issuance, transfer, and retirement of SAF certificates.

SABA Eligible Requirement: All SAF certificates must be registered in the [SAFc Registry](#) or another [SABA Eligible Registry](#)^{xii} listed on the SABA website^{xiii}.

Rationale: SABA's mission to drive the growth of a high-integrity SAF market necessitates transparency and standardization related to the use of SAF certificates. Environmental attribute registries support emission reduction claims made by SAF certificate buyers and incentivize fuel providers to demonstrate environmental integrity via certification. The SABA Eligible Registries align with the [Book and Claim Community's Principles and Best Practices for Book and Claim Systems in Heavy Transport](#).

7. Adopting and updating the Sustainability Framework

The original Framework was adopted according to the following process:

- i. A draft of this Framework was published for consultation by SABA Members and external stakeholders for 30 calendar days. Participants in the consultation submitted observations or recommendations in writing to the SABA Secretariat.
- ii. After considering the relevance and appropriateness of the observations and recommendations, the SABA Management Team submitted the revised Sustainability Framework to the SABA Customers Advisory Board for adoption.
- iii. The SABA Customers Advisory Board adopted the Version 1 of the Framework by consensus on November 4, 2022.
- iv. The SABA Customers Advisory Board further adopted revisions to the Framework by consensus on:
 - a. August 7, 2023 (Version 2)
 - b. March 26, 2025 (Version 3)
 - c. MONTH XX, 2026 (Version 4)

This version of the Framework, Version 4, is applicable from the date of publication onwards.

The SABA Management Team will continuously monitor developments concerning SAF and will propose updates to the Framework as needed.

At least every two years, the SABA Management Team will conduct a review of the Framework, with a view towards raising ambition over time. The review will examine whether the Framework's provisions are effective and whether there is a need for any updates based on developments in the market (such as new technology) and improvements in the relevant science. The SABA Management Team will take care to consider and propose revisions in a manner that is cognizant of existing commercial agreements based on earlier versions of the Framework, e.g. through use of grandfathering provisions if and where appropriate.

Future versions of the framework will be adopted based on the SABA governance rules in place at that time.

8. Appendix

a. Glossary

- i. **Avoided emissions:** Greenhouse gas emissions that have been ‘avoided’ by using a specific product or service, compared to a situation where the product or service had not been used
- ii. **Bioenergy with carbon capture and storage (BECCS):** The process of extracting bioenergy from biomass and capturing and storing the carbon dioxide that is produced
- iii. **Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA):** A global market-based scheme established by the International Civil Aviation Organization (ICAO) to manage and reduce CO₂ emissions from international flights
- iv. **Carbon Capture and Storage (CCS):** The process of recovering carbon dioxide produced by industrial facilities and power plants and moving it to locations where it can be kept from entering the atmosphere
- v. **Displacement:** Shifting emissions from one geography, sector, or activity to another
- vi. **Direct Land Use Change (DLUC):** The conversion of a specific piece of land for another purpose, such as biomass production
- vii. **Energy Attribute Certificate (EAC):** A certificate representing the environmental attributes (including carbon intensity, GHG reductions, and other sustainability characteristics that substantiate a claim) associated with a given quantity of lower-carbon product or service (e.g., fuel).
- viii. **Greenhouse Gas Protocol (GHGp):** An international standard for corporate accounting and reporting of greenhouse gas emissions, which is an initiative managed by World Resources Institute and World Business Council for Sustainable Development
- ix. **Global Warming Potential:** A measure of how much energy the emission of 1 ton of a gas will absorb over a given period of time, relative to the emission of 1 ton of carbon dioxide
- x. **International Civil Aviation Organization (ICAO):** A United Nations agency which works with its member states to support the safe, secure, sustainable and efficient operation of international civil aviation
- xi. **International Sustainability and Carbon Certification (ISCC):** A CORSIA-approved sustainability certification system used to verify that fuels, materials, and supply chains meet specific environmental and social standards
- xii. **Indirect Land Use Change (ILUC):** A phenomenon where the production of biofuels indirectly leads to changes in land use patterns, potentially resulting in increased deforestation, land conversion, or displacement of agricultural activities
- xiii. **Life Cycle Assessment (LCA):** The compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its lifecycle
- xiv. **Removals:** The transfer of a greenhouse gas from the atmosphere to storage within a non-atmospheric pool, which can be from biogenic or technological sinks
- xv. **Renewable energy certificate (REC):** A market-based instrument that represents the property rights to the environmental, social, and other non-power attributes of renewable electricity generation
- xvi. **Roundtable for Sustainable Biomaterials (RSB):** A CORSIA-approved sustainability certification system used to verify that fuels, materials, and supply chains meet specific environmental and social standards
- xvii. **Science Based Targets initiative (SBTi):** An international organization that helps companies set GHG emissions reductions aligned with climate science and the Paris Agreement’s 1.5°C goal
- xviii. **Sustainability Certification System (SCS):** A program or initiative established to assess, verify, and certify the sustainability performance of products, processes, or organizations against specific sustainability criteria and standards
- xix. **Well-to-Wake (WtW):** The complete aviation fuel life cycle as evaluated in an LCA, encompassing feedstock production, feedstock processing, feedstock transport, fuel production, fuel transport, and fuel use

b. When SAF does and does not meet Regulatory Surplus for specific regulations

Example 1: RefuelEU Aviation (Requirement to adopt SAF)

Description: The Refuel EU mandate requires aviation fuel suppliers in the EU to blend a minimum percentage of SAF meeting specific eligibility requirements (including an emissions reduction threshold) into fuel delivered to European airports.

Regulatory Surplus Evaluation: SAF reported under the jurisdiction of Refuel EU Aviation is required to demonstrate regulatory surplus because ReFuel EU directly requires the supply of SAF. SAF volumes that contribute towards the supplier's fulfilment of this mandate do not demonstrate regulatory surplus. However, any SAF volumes that exceed the mandated percentage can demonstrate regulatory surplus.

Example with Direct Supplier: In 2025, ReFuelEU Aviation mandates that 2% of all jet fuel supplied must be qualifying SAF. If Supplier A is subject to the ReFuelEU mandate and wants to demonstrate regulatory surplus for SAF supplied in Germany, the volumes must exceed the 2% blending requirement. For example, supplying 10,000 tons of SAF within a 100,000 ton total jet fuel delivery would yield 8,000 tons of regulatory surplus, as 2,000 tons are represented in the 2% compliance mandate.

Example with Entity in Supplier's Immediate Supply Chain: Airline Company B purchases SAF from Supplier A in Germany. Supplier A is in Airline Company B's physical supply chain and is the regulated entity under ReFuel EU. For Airline Company B to issue a voluntary SAFc based on SAF purchased from Supplier A, Airline Company B must ensure that Supplier A, as the regulated entity, demonstrates regulatory surplus for the SAF. For example, Airline Company B must ensure that the SAF received from Supplier A is a subset of the 8,000 tons of SAF that are able to demonstrate regulatory surplus¹.

Example 2: Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) (Requirement to meet emissions reduction threshold)

Description: CORSIA requires airlines to offset or reduce emissions associated with their international aviation activity to 85% of their 2019 emissions. Airlines can meet this obligation through the use of SAF, the purchase of offsets, or both.

Regulatory Surplus Evaluation: SAF reported under the jurisdiction of CORSIA is required to demonstrate regulatory surplus because CORSIA mandates that operators meet a defined decarbonization requirement at the individual (i.e. airline) level. SAF volumes that contribute to an airline's CORSIA emissions reduction requirements do not demonstrate regulatory surplus. An airline must be able to demonstrate they have met their CORSIA emission reduction requirement in the absence of any SAF used to generate voluntary SAFc.

Regulatory Surplus Examples for CORSIA: Airline Company A is under the jurisdiction of CORSIA. Airline Company A plans to comply with CORSIA requirements through a mixture of CORSIA Eligible Emissions Units (CEEU) and SAF. To demonstrate regulatory surplus for a volume of SAF, Airline Company A must ensure that the SAF volumes used to generate voluntary SAFc were not used to meet Airline Company A's compliance obligation (i.e. Airline Company A used enough CEEUs and SAF for compliance purchases to meet 100% of its compliance obligation).

¹ Airline Company B could ensure that Supplier A demonstrates regulatory surplus for any purchased SAF through contractual obligations and supporting documentation.

“Immediate Supply Chain” Example: If a fuel provider is the SAFc issuer, the fuel provider must ensure that the airline recipient of the underlying physical SAF volumes will demonstrate regulatory surplus to CORSIA obligations.

Example 3: California Low Carbon Fuel Standard (CA LCFS) (Market-based credit system with a defined emissions reduction threshold for most fuels, excluding aviation)

Description: The CA LCFS sets a declining benchmark for the carbon intensity of specific fuels and requires that fuels produced or imported into California report their life-cycle carbon intensity (CI). Regulated entities under CA LCFS generate credits for fuels with carbon intensities below the CI benchmark, and deficits for fuel with carbon intensities above the CI benchmark. To comply with CA LCFS, regulated entities are required to surrender credits equal to the number of deficits generated during the compliance period. Credits can be generated through producing or importing low carbon fuels, or purchased from other regulated entities. Aviation fuels are exempt from the CA LCFS carbon intensity requirements, but aviation fuels are still eligible to generate credits.

Regulatory Surplus Evaluation: SAF reported under the jurisdiction of the CA LCFS does not need to take any additional steps to demonstrate regulatory surplus, because aviation fuel is excluded from the program’s carbon intensity requirements, and it is optional to generate credits from SAF. CA LCFS credits created from SAF generating voluntary SAFc may be retired or sold to other obligated parties under the regulation.

In jurisdictions where aviation fuels are covered within the regulatory scope of an LCFS program, regulated entities must demonstrate that any LCFS credits generated from SAF produced and sold on to voluntary Scope 3 customers was not used toward their own compliance obligation. They can sell the corresponding volume of LCFS credits to other regulated parties and demonstrate this through an attestation.

Regulatory Surplus Examples for CA LCFS: Company A produces SAF in California, which generates 1500 LCFS credits. All of Company A’s SAF volumes associated with the 1500 surplus credits can be sold to voluntary customers and the LCFS credits can be either sold or retired.

Example 4: EU Emissions Trading System (ETS) (Cap-and-trade system)

Description: The EU ETS is an economy-wide cap and trade program that requires emitters in specific sectors to monitor and report their annual emissions, and surrender allowances equal to these emissions. These allowances can be purchased in auctions, traded between obligated parties, and in certain cases, allocated freely to certain regulated entities.

Regulatory Surplus Evaluation: SAF reported under the jurisdiction of the EU ETS does not need to take any additional steps to demonstrate regulatory surplus. The EU ETS regulation requires regulated entities to surrender enough allowances to fully account for their emissions, as opposed to requiring a specific emission reduction threshold or emission reduction volume from the individual entities. Thus, when applied to aviation, the regulatory structure incentivizes usage of SAF but does not mandate it. Because SAF is not required to be used by a covered entity to meet its own regulatory obligation or that of any entity in its immediate supply chain, SAF used in the EU ETS can freely generate voluntary SAFc.

Regulatory Surplus Examples for EU ETS: Airline Company B uplifts SAF within the EU. By using SAF, Airline Company B reduces its monitored and reported emissions, lowering its need to purchase allowances, but not to meet its own mandated emission reduction obligation. Airline Company B is

not required to take additional action to demonstrate regulatory surplus for the uplifted SAF and can sell corresponding SAFc to the voluntary markets.

c. Technical endnotes

ⁱ For reference, the methodology developed by ICAO's technical bodies and adopted by ICAO's Council is contained in Annex 16, Volume IV of the Chicago Convention on International Civil Aviation, the SARPs and supporting documents - they are the first and only set of multilaterally agreed methodologies for SAF.

ⁱⁱ As specified in Section 1, Table 1 of [CORSIA Methodology for Calculating Actual Life Cycle Emissions Values](#)

ⁱⁱⁱ Any low ILUC risk add-on certifications obtained should follow the 'Unused Land Approach', rather than the 'Yield Increase Approach'. This is because yield increases occur regularly even without specific interventions associated with biofuels policy, making it difficult to accurately determine the increase in crops associated with a specific intervention, as noted here: [Analysis of high and low indirect land-use change definitions in European Union renewable fuel policy](#).

^{iv} Any low ILUC risk add-on certifications obtained should follow the 'Unused Land Approach', rather than the 'Yield Increase Approach'. This is because yield increases occur regularly even without specific interventions associated with biofuels policy, making it difficult to accurately determine the increase in crops associated with a specific intervention, as noted here: [Analysis of high and low indirect land-use change definitions in European Union renewable fuel policy](#).

^v PtL SAF receiving RSB or ISCC EU certification will be required to follow the RFNBO and RCF Standard.

^{vi} ISCC PLUS certified SAF is eligible provided the SAF has been mass balanced throughout the supply chain, rather than having been subject to the 'multi-site credit transfer' mechanism possible under ISCC PLUS, as described in section 9.3.1 of the ISCC PLUS system document (available [here](#)). Sustainability declarations issued under ISCC PLUS are required to state whether a 'multi-site credit transfer' has been conducted in the product's upstream supply chain. In addition, it is required that the GHG add-on is applied throughout the supply chain, to allow for accurate calculation of life cycle emissions of ISCC PLUS certified SAF.

^{vii} This requirement is to be evaluated using the following formula: $(1 - (x/y)) * 100 \geq 60\%$, where "x" stands for the LCA value adjusted according to the requirements of this Framework, and "y" stands for the fossil fuel baseline applicable to the SAF.

^{viii} Currently, these are the baselines for fossil jet fuel in gCO₂e/MJ: a) 89g for CORSIA jet fuel, b) 95g for CORSIA aviation gasoline, c) 90g for RSB Global, d) 94g for EU RED

^{ix} SABA will recognize any feedstock with a CORSIA Default ILUC LCA value of ≤ 0 as compliant, provided it aligns with any version of the CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels published between the release of this Framework and the present

^x Miscanthus, Poplar, Switchgrass are the energy crops that have a CORSIA Default ILUC LCA of < 0 and could be included on the EU list under the category of "non-food cellulosic material".

^{xi} The 2022 Searchinger et al. paper [EU climate plan boosts bioenergy but sacrifices carbon storage and biodiversity](#) describes how EU policies are incentivizing cropland to be used for energy crops.

^{xii} The SAFc Registry automatically identifies SABA Eligible and SABA Advanced certificates, applying the necessary LCA adjustments per Section 2.

^{xiii} For details on how the criteria defined in this Framework are operationalized in the context of an independently governed SAF certificate registry, please refer to the [Sustainable Aviation Fuel Certificate Registry Rulebook](#).