RSB – ROUNDTABLE ON SUSTAINABLE BIOMATERIALS

# RSB Market Acceleration Indicator Module

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# Introduction

The Roundtable on Sustainable Biomaterials Association (RSB) is a global, multi-stakeholder organisation dedicated to driving the sustainable development of the bioeconomy – based on our best-in-class sustainability standards.

RSB has been leading the development of a credible and effective book and claim mechanism that aims to expand the outreach of sustainable fuels and accelerate the decarbonisation of hard-to-abate sectors such as aviation and shipping.

This Module aims to define market acceleration standards recognising the benefit of long-term offtake agreements to transact the environmental attributes (EAs) of sustainable aviation fuel (SAF) using RSB's Book and Claim (B&C) System. Accordingly, it should be read in the context of the RSB Book and Claim System[1] and the RSB Market Acceleration Indicator Methodology. Contracts covering transactions of the physical product (decoupled from the EAs) are outside the scope of this Module.

When EAs tracked via the RSB Book and Claim Registry are secured through an offtake agreement that meets the minimum standards outlined in this document, those transactions can qualify for a Market Acceleration Indicator (MAI) claim. This claim acknowledges the purchaser's long-term investment in the SAF industry and supply chain. Additionally, as these claims are made publicly available, the indicator claim serves to demonstrate the existence of a long-term offtake agreement that constitutes a robust demand signal and differentiates transactions from spot purchases that are published within the RSB Book and Claim Registry.

This Module has been reviewed and validated by an expert group, representing financial and legal experts and RSB member stakeholders. It is part of the RSB Book & Claim System (including the normative Manual and the RSB Registry) and is intended as best practice for demonstrating additionality through the investment in market acceleration using book and claim value chains.

Revision table

| Date | Version name | Description |
|---|---|---|
| 04 December 2025 | RSB Market Acceleration Indicator Module – Draft for pilot | Initial version |
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[1] https://rsb.org/programmes/book-and-claim/

# Table of Contents


**Introduction** ..... 2

**Table of Contents** ..... 3

**A. The Aim of this Impact Indicator Module** ..... 5

**B. The Scope of this Impact Indicator Module** ..... 5

**C. Version and Effective Date** ..... 6

**D. Using this Impact Indicator Module** ..... 6

**E. Terms and Definitions** ..... 7

**F. Contact Details** ..... 9

**G. Requirements** ..... 9

G.1. Governance ..... 9

G.1.1. Requirements related to roles and responsibilities ..... 9

G.1.2. Requirements related to decision-making processes ..... 10

G.1.3. Procedures for making amendments to the agreement ..... 10

G.1.4. Processes for decision-making in response to unforeseen circumstances or force majeure events ..... 11

G.1.5. Requirements related to compliance and reporting ..... 11

G.2. Strategy and Objectives ..... 12

G.2.1. Requirements related to EA generation and supply objectives ..... 12

G.2.2. Requirements related to environmental and sustainability goals ..... 12

G.2.3. Requirements related to financial and commercial objectives ..... 13

G.2.4. First-time production plant ..... 14

G.3. Risk Management and Mitigation ..... 14

G.3.1. Requirements related to risk identification ..... 15

G.3.2. Requirements related to risk mitigation strategies ..... 15

G.3.3. Supply and demand forecasting adjustment mechanisms ..... 16

G.3.4. Price adjustment, revenue and pricing protection ..... 16

G.3.5. Risk mitigation for demand volatility ..... 16

G.3.6. Requirements related to the allocation of risks ..... 17

G.4. Terms and Conditions ..... 17

G.4.1. Requirements related to contract duration ..... 17

G.4.2. Requirements related to pricing and payment terms ..... 18

G.4.3. Requirements related to delivery and supply obligations ..... 23
G.4.4. Requirements related to Force Majeure ..... 24
G.4.5. Requirements related to termination clauses ..... 27
G.5. Performance Metrics and Monitoring ..... 28
G.5.1. Requirements related to key performance indicators (KPIs) ..... 28
G.5.2. Requirements related to monitoring and reporting ..... 28
G.5.3. Dispute Resolution ..... 29
G.5.4. Other Contractual Terms ..... 30
G.5.5. MAI Clauses Appendices ..... 30

# A. The Aim of this Impact Indicator Module

This module outlines the requirements for an RSB Impact Indicator: Market Acceleration Indicator (MAI) claim, an energy transition signal designed to work in conjunction with the RSB Book and Claim System[2]. The aim is to demonstrate to funders and customers of SAF suppliers a clear indication that transactions conducted using this approach are driven by an empirically sound and verifiable demand signal.

This module provides a comprehensive framework for creating and executing MAI Clauses. When these MAI Clauses are incorporated into a SAF EA Offtake Agreement and the associated EAs are processed through the RSB Book and Claim System as Book and Claim Units (BCUs), the resulting Retirement Statement can include a Market Acceleration Indicator Claim, signifying adherence to this module.

This module is designed to ensure that offtake agreement clauses, under an MAI claim, demonstrate a robust demand signal.

To make a Market Acceleration Indicator Claim, this module must be used in conjunction with the RSB B&C Manual (RSB-PRO-20-001-001) and its associated auditing requirements.

RSB also recently collaborated with RMI on the development of a 'playbook' that will offer additional guidance to complement the Market Acceleration Indicator documentation. For further information, see https://rmi.org/insight/blueprints-for-bankability/.

# B. The Scope of this Impact Indicator Module

Effective recognition of demand signals, such as long-term offtake agreements, can facilitate the financing of new production projects. This, in turn, can accelerate additional production capacity while achieving greater transparency, efficiency, and sustainability, backed by the stability of long-term offtake agreements.

The requirements in this Impact Indicator Module apply to all entities engaged in the purchasing and selling of SAF EAs through SAF EA Offtake Agreements and using the RSB B&C System who wish to demonstrate a strong demand signal from the sector. This includes, but is not limited to, fuel producers, transport service providers, corporate offtakers, manufacturers (e.g. aerospace companies), government entities, and financial institutions involved in financing fuel manufacturing projects. The lack of an MAI claim should not be assumed to indicate a lack of robustness or demand for the associated EAs, rather that no MAI claims have been pursued through the RSB Standard.

[2] See https://rsb.org/programmes/book-and-claim/ for more information

## C. Version and Effective Date

Version 1.0 of this *RSB Market Acceleration Indicator Module* is effective from [].

Following RSB's Procedure for Development and Modification of RSB Standards, RSB Procedures and RSB Guidance [RSB-PRO-15-001], the RSB Secretariat conducted iterative stakeholder consultations to validate the *RSB Market Acceleration Indicator Module*, representing the consensus amongst experts and stakeholders.

Any stakeholder may submit comments on this document by writing to the RSB Secretariat. The Secretariat will conduct a regular review of this document at least every three ("3") years, or earlier if deemed necessary by the Secretariat or the RSB Board of Directors.

## D. Using this Impact Indicator Module

The procedures outlined in this Module are normative[3] with respect to their purpose, scope, effective date, notes on usage, references, terms, definitions, requirements, and annexes unless otherwise indicated.

This Module uses precise language to indicate which provisions are requirements, which are recommendations, and which are permissible or allowable options that companies may choose to follow. The term "shall" or "must" is used throughout this document to indicate what is required for a book & claim transaction to conform with the RSB Market Acceleration Impact Module. As this document includes a substantial amount of guidance, all instances of the normative requirements—indicated by the words "shall" or "must" have been emphasised in bold for clarity, with an audit icon placed in the margin to assist users in easily identifying them. The term "should" is used to indicate a recommendation but not a requirement. The term "may" indicates an option that is permitted or allowed. "Need," "can," and "cannot" may be used to provide guidance on implementing a requirement or to indicate when an action is or is not possible.

To satisfy the requirements of the Market Acceleration Indicator Module and enable BCUs to be retired with MAI claims, the clauses listed in Section G that are 'required' using the precise language described above must be incorporated into the SAF EA offtake agreement governing those BCU transactions.

During implementation, the System User shall ensure they meet the requirements specified in this Module and any other measures necessary to achieve its aim.

Negotiating long-term SAF EA offtake agreements is a complex process that requires at least several months to complete and can take years. These negotiations aim to establish a set of mutually acceptable commercial terms that support a sustainable and reliable long-term contractual relationship between the parties. While no standard template exists for such agreements, and the wording of each contract should be

[3] Normative, in the context of standards documents, means the requirements must be followed to ensure compliance with the standard.

tailored to the specific circumstances, many of these agreements share common features. The following proposed clauses reflect these shared elements and can serve as a helpful starting point for drafting or refining a commercial offtake agreement. The scope of this module only covers binding offtake agreements and does not consider non-binding commitments, such as Memoranda of Understanding and Letters of Intent.

Offtake agreements for long-term SAF EAs are typically extensive, often comprising hundreds of pages with numerous provisions. These agreements frequently include annexes and schedules detailing technical specifications, such as SAF quality standards or certification requirements. Every aspect of the contract, including the economic parameters within which it operates, is subject to negotiation between the parties. The importance of specific arrangements can shift throughout the negotiation process, leading to adjustments in priorities and modifications to the agenda. While parties have the flexibility to include or exclude the majority of the provisions as needed, a small number of provisions are critical and are mandated under this Impact Indicator Module.

In particular, the contract must be binding, it must address price risk and there must state a minimum term length. Key provisions are detailed in the content that follows.

Offtake agreements for EAs are often negotiated well in advance, typically before the EAs need to be transacted and tracked, and frequently before the associated production plant has reached final investment decision (FID). This document is intended for use at the early stage of contract negotiations to ensure the inclusion of clauses necessary to support a MAI claim once the plant is operational and the EAs are available for transaction.

## E. Terms and Definitions

Audit

Systematic, independent, and documented process to obtain and evaluate audit evidence objectively to determine the extent of audit criteria fulfilment (Source: ISO 19011:2011).

Book and Claim
Chain-of-custody model in which the administrative record flow does not necessarily connect to the physical flow of material or product throughout the supply chain (Source: ISO 22095:2020). See below for the definition of RSB Book and Claim System.

Book and Claim Unit

A unit representing one metric tonne of neat SAF, facilitating sustainability claims transfer.

Claim

Declared information regarding the specified characteristics of a material or product that is attributed to the claimant through retirement and, in the case of an emission reduction claim, is to be accounted for in its emissions inventory.

Demand Signal

An indication to announce that goods are currently needed, essential for guiding SAF production and investment. This module guidance provides a contractual method to demonstrate a "demand signal."

Market Acceleration Indication (MAI) Clauses

Clauses which, when included in an SAF EA offtake agreement, demonstrate a binding willingness to pay (WTP).

Market Acceleration Indicator Claim

A Claim that demonstrates compliance with the RSB Market Acceleration Indicator Module.

Environmental Attributes (EAs)

Environmental benefits associated with SAF, e.g. greenhouse gas savings which can be transferred separately from the physical product using Book and Claim.

Force Majeure Event

An occurrence beyond the parties' control (e.g., pandemic, government action) that may suspend or terminate contractual obligations.

Hedging Strategies

Financial practices to protect against price and/or currency volatility.

Key Performance Indicators (KPIs)

Metrics for tracking the performance and compliance of the fuel EAs agreement.

Retirement Statement

A publicly available document issued by the RSB Book and Claim System, it states the ownership of the Claims associated with each Book and Claim transaction and provides data associated with those transactions, e.g., greenhouse gas emissions reduction and feedstock type.

RSB Book and Claim System

A Book and Claim system comprising the RSB Book & Claim Manual, Digital Registry, and Recognition Procedure.

RSB Market Acceleration Indicator

An auditable energy transition signal Claim that can be added to RSB Book and Claim transactions backed by binding long-term offtake agreements as per the requirements of this module.

SAF Environmental Attributes Offtake Agreement

Contract between SAF supplier and Environmental Attribute buyer securing current and future demand and supporting financing for production.

# F. Contact Details

The RSB is a multi-stakeholder organisation developing collaborative solutions. The *RSB Market Acceleration Indicator Module* procedure has been carefully developed with partners and we welcome any feedback and suggestions for further improvements.

For more information visit: https://rsb.org/programmes/book-and-claim/

Or email us at: bookandclaim@rsb.org

# G. Requirements

Legal certainty, transparency, and mutual understanding are essential in SAF EA offtake agreements to ensure these long-term binding commitments provide strong market demand signals. The following MAI provisions establish the rights and obligations of the SAF EA buyer and seller and cover fundamental aspects of successfully executing these offtake agreements.

## G.1. Governance

### G.1.1. Requirements related to roles and responsibilities

The MAI Clauses must specify the roles and responsibilities of each party involved in the agreement. Key areas to cover include:

*The party responsible for fuel production and delivery of EAs*

Where relevant[4], the fuel producer may be requested to demonstrate proven expertise in the specific type of SAF production, with a track record of consistent large-scale operations through a reliable and well-established certified supply chain equipped with the latest technological capabilities, ensuring that fuel can be produced efficiently according to the agreed upon specifications included in the contract.

Financial stability supported by solid financial health, sufficient cash flow, working capital and assets to handle any short/mid/long-term operational changes will be key to supporting a long-term reliable engagement under the terms of the agreement. In this regard, a comprehensive financial model that forecasts project financials is central to drive the decision to invest.

Certified compliance with all applicable environmental regulations and industry standards is critical to avoid operational delays or penalties, which could jeopardise long-term delivery commitments.

[4] For example, in projects utilising established technologies, and where the contracted party has experience in deploying that technology. See also section G.2.4 for where this is not the case.

*The party responsible for payment and financial obligations*

The offtaker or buyer, will have an established market presence and a history of persevering through market cycles, with stable and diversified sources of revenue, a strong credit profile including a "good" credit rating, debt levels and payment history to ensure long-term payment obligations can be fulfilled without default. Proven stable demand throughout the contract will be key in the long-term commitment to guarantee sustained revenue.

*The entity or committee tasked with dispute resolution*

Committing to an efficient decision-making process in disputes arising out of the contract's performance is very important to avoid the disruption of the performance of the rights and obligations in the agreement, which could negatively impact the overall stability of the project.

In this sense, submitting contractual disputes to an independent third party, free from bias toward either Party, is highly advisable to maintain the integrity of the contract. Additional credibility in this process can be ensured by designating a recognised dispute resolution body with regional or international standing and cross-jurisdictional enforceability.

### G.1.2. Requirements related to decision-making processes

Enforceability, reliability, transparency and adaptability are key aspects of long-term MAI as reflected in OAs. Well-defined decision-making processes, with clearly defined rights and obligations and potentially involving project financing third parties not necessarily being Parties to the agreement, will enhance these values and provide the predictability needed for projects of this nature.

### G.1.3. Procedures for making amendments to the agreement

Terms defining the steps to propose and approve amendments to the agreement shall include (i) clear and defined roles of the authorised individuals and/or governing bodies with the power to propose amendments; (ii) mandatory steps to follow when suggesting changes (including, but not limited to, a specified formal notice, and means of the proposal, preferably in writing for legal certainty); (iii) approval thresholds for the negotiated amendments ; and (iv) clear timeframes within which decisions need to be taken and therefore proposed amendments should be reviewed and approved or rejected, with the potential inclusion of a postponement of the proposed amendment.

For the purposes of ensuring an efficient decision-making process for proposed amendments, the agreement will distinguish between material and non-material amendments – major changes (material) such as alterations to structural terms like the Parties rights and obligations under the agreement, pricing terms and the term or duration of the agreement, will require more rigorous procedures including the involvement of the potential project financing third party, while minor changes (non-material) like clarifications or smaller corrections, can follow a simplified approval process, with only the Parties to the agreement being involved. A specific mechanism

to adjust the forecasted SAF demand is explicitly previewed and discussed in subsection G.3.3.

For appropriate enforceability and reliability, adequate records of all amendments, must be formally documented (through addenda or contract revisions, or any tools that may apply given the circumstances). This ensures legal enforceability and clarity for all stakeholders involved.

### G.1.4. Processes for decision-making in response to unforeseen circumstances or force majeure events

Unforeseen events such as supply chain disruptions can have significant impacts on the agreement's implementation, which require OAs governing SAF and SAF EA supply to lay out clear processes to handle these situations and avoid protracted disputes or financial instability.

Prompt notice and documentation on the event's impact on either party's ability to fulfil the agreement need to be clearly outlined in force majeure processes for MAI agreements. The Parties must decide on potential temporary relief from obligations and how to resume operations after the event has passed, revisiting specific terms in the agreement to ensure they remain relevant and applicable to the updated context.

Adequate risk allocation in decision-making for force majeure events can help reduce the risk that either buyer or seller will bear an undue financial burden affecting the long-term viability and enforceability of the project terms. For these purposes, involving the project financing independent third party in decision-making can also help ensure transparency and predictability. In this case, insurance companies and risk mitigation procedures could also cover specific disruptions and re-allocate the risk with the required expertise and efficiency.

### G.1.5. Requirements related to compliance and reporting

One of the foundational elements of compliance is the establishment of regular reporting requirements. These reports should include detailed operational data, such as operational reports outlining production volumes, delivery schedules, and inventory levels. Such reports help both parties monitor performance against agreed benchmarks, enabling proactive identification of potential issues. The frequency and format of these reports should be specified in the agreement to ensure clarity and consistency.

To verify adherence to the terms of the agreement, periodic compliance audits shall be mandated. These audits may cover financial records, operational processes, and any relevant environmental, health, or safety standards. It's important to specify the scope and frequency of audits, as well as whether they will be conducted internally, by an independent third party, or collaboratively. Audits help safeguard the integrity of the arrangement and ensure that both parties are meeting their respective obligations under the agreement.

Non-compliance with the terms of the offtake agreement can have serious financial and operational consequences. To address this, the agreement must include a clearly defined penalty structure for breaches, such as late deliveries, shortfalls in production,

or failure to meet quality standards. Remedies might include financial penalties, compensation for lost revenue, or even the termination of the agreement in cases of severe or repeated breaches. This section should also outline a process for dispute resolution to handle instances of alleged non-compliance fairly and efficiently.

## G.2. Strategy and Objectives

### G.2.1. Requirements related to EA generation and supply objectives

The MAI Clauses must clearly define the EA generation goals. This must include the type of fuel to be supplied (e.g. sustainable aviation fuel), the fuel quality standards to be met (e.g. ASTM D7566), the feedstock to be used to generate the fuel supplied (e.g. Used Cooking Oil, source segregated food waste, agricultural biomass), the technology used to convert the feedstock to fuel (e.g. HEFA, AtJ, FT), the quantity and units of EAs to be supplied (e.g. of $CO_{2eq}$ reduced, tonnes of fuel, BCUs) and the expected timeline for EA delivery, including any phased rollouts or capacity expansions, any thresholds associated with minimum EA standards (e.g. minimum $CO_{2eq}$ reduction %, minimum $tCO_{2eq}$/EA) and the sustainability certification standard applied (i.e. either EU RED, CORSIA or RSB Global)

For the agreement to be recognised under this Impact Indicator Module, the EA quantity to be supplied shall relate to a quantity of fuel that is at least 0.2% of the nameplate capacity of the facility. The 0.2% can represent an average capacity factor over the contract duration covering contracts with escalating supply requirements.

### G.2.2. Requirements related to environmental and sustainability goals

All sustainability requirements set out in the RSB Book and Claim Manual must be met. Reference to the manual should be made in the OA.

The agreement shall include clauses requiring full compliance with all relevant environmental laws, regulations, and industry standards. These may cover areas such as waste management, pollution control, and biodiversity protection. To strengthen enforcement, the agreement could stipulate regular environmental audits and certifications, ensuring both parties maintain compliance and avoid potential fines or reputational damage. Any changes in environmental regulations during the term of the agreement should trigger a review and, if necessary, updates to the compliance framework.

In addition, a forward-looking offtake agreement should outline specific plans for adopting clean energy technology and implementing energy-efficient practices. This might include commitments to sourcing renewable energy for production processes, upgrading to low-emission equipment, or utilising circular economy principles to minimise waste. The agreement could also encourage innovation by requiring both parties to collaborate on research and development projects aimed at improving environmental performance. Clear milestones, supported by incentives for achieving these goals, can ensure that sustainability remains a priority throughout the term of the agreement.

By integrating these environmental and sustainability objectives into the offtake agreement, both parties can demonstrate their commitment to responsible business practices. This not only helps mitigate environmental risks but also can strengthen the relationship between the supplier and purchaser, as they work together toward a shared vision of sustainability.

### G.2.3. Requirements related to financial and commercial objectives

Clear financial and commercial objectives are the backbone of any offtake agreement, ensuring that both parties have a shared understanding of pricing, payment expectations, and risk management. These objectives not only reduce the likelihood of disputes but also provide a framework for the financial stability of the arrangement. Below are the key financial elements that should be addressed in the agreement.

A. The pricing structure is one of the most critical components of an offtake agreement. It must specify whether the agreed-upon price is a fixed rate, a variable rate tied to specific market indices (e.g., commodity prices, inflation rates), or a hybrid model. A fixed rate provides predictability for both parties, while a variable rate allows for flexibility in fluctuating markets. Additionally, clauses should outline any price adjustment mechanisms, such as periodic reviews or renegotiation triggers, ensuring the pricing remains fair and reflective of market conditions.

B. Payment terms are essential to maintaining a smooth financial relationship. The agreement must detail the invoicing schedule, including the frequency of invoices (e.g., monthly, quarterly), the format of the invoices, and the timeline for payments. Accepted payment methods—such as bank transfers, credit card payments, or electronic funds transfer—should also be specified. To mitigate risks, the agreement shall include penalties for late payments, such as interest charges or suspension of deliveries, ensuring timely compliance with financial obligations.

- To safeguard against financial risks, particularly in long-term agreements, financial stability measures shall be included. These may involve requiring letters of credit or bank guarantees to ensure the purchaser's ability to meet payment obligations. In some cases, an escrow account may be used to hold funds until specific contractual milestones are met. These measures provide assurance to both parties, reducing the financial exposure and enhancing trust in the commercial arrangement.

By addressing these financial and commercial objectives comprehensively, an offtake agreement creates a clear and reliable framework that helps support the long-term success of the project. Well-defined terms ensure transparency, minimise risks, and foster mutual confidence, allowing both parties to focus on achieving their strategic goal of additional SAF production.

### G.2.4. First-time production plant

There are two scenarios where the forecasted capital costs at the time of contract signing will very likely under-represent the true costs for project completion. First-of-a-kind (FOAK) commercial-scale refineries pioneering new technologies have only been proven at smaller demonstration plants that are commonly 10-100x less in capacity. Likewise, first-time construction engineering firms (EPCs) building a commercial facility with relatively recently proven technology at pre-commercial scale combined with first-time operators of that technology will also likely be subject to significantly higher capital costs due to the increase in perceived risk.[5] For example, Breakthrough Energy Catalyst has found that the actual capital costs are typically double (2x) the planned costs at time of Financial Investment Decision (FID).[6] Because of this dynamic, MAI contracts must include a mechanism to address anticipated cost over-runs to ensure that pricing from binding contract volumes will not impede the project achieving completion.

Additionally, savvy buyers understand that the supply from first-time production plants (FOAK and new operators) will likely exceed the cost from future plants. While these buyers gain from early access to the product, they also may seek to minimize the future burden associated with the cost structure from the pioneering refineries. Producers and buyers can consider terms to establish preferred options for buyers to purchase a blended supply that includes both a first-time production plant and future plants that would be expected to leverage the know-how and efficiencies learned from the pioneering plants. The longer the duration of the contract, the more relevant the need to address this challenge.

## G.3. Risk Management and Mitigation

A well-developed risk management and mitigation structure that addresses financial, operational, legal, and market uncertainties will be key for an offtake agreement to attract long-term financing.

The objective of the Risk Assessment is to get a clear overview of all risks surrounding the project so that they can be allocated to those parties (including third parties such as financiers and other stakeholders) that are better positioned to absorb and manage them.

Proper risk categorisation, tailored risk mitigation strategies, and responsibility allocation for each risk category will reduce the project's risk profile and improve its attractiveness to potential funding.

MAI Clauses that address risk are intended to help anticipate, interpret, and respond to changes in demand throughout an OA. In the context of long-term financing, MAI

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[5] These are situations in which the conditions set out in section G.1.1 regarding the proven expertise of the contracted parties cannot be met.

[6] Breakthrough Energy Catalyst CEO Mario Fernandez on the Catalyst podcast, 16th of January 2025 accessible here.

Clauses can play a significant role in ensuring the stability and predictability of revenue flows by effectively managing demand-related risks.

This risk management and mitigation strategy should ideally be applicable throughout the project's life cycle, optimising leverage at the project level to foster liquidity and ensure bankability. Some examples could include risk insurance, performance bonds and parent company guarantees.

### G.3.1. Requirements related to risk identification

The MAI Clauses must include a general risk identification section that categorises potential risks, such as:

- Operational Risks: Risks associated with the failure of the fuel generation facility, including equipment breakdowns, maintenance issues, or supply chain disruptions.
- Financial Risks: Risks related to fluctuations in fuel prices, currency exchange rates, or changes in financial markets.
- Regulatory Risks: Risks arising from changes in laws, regulations, or government policies that may impact the execution of the MAI Clauses, as well as inherent geopolitical risks in the host country and incentive risks e.g. LCFS credit pricing.
- Environmental Risks: Risks related to environmental factors such as natural disasters, climate change impacts, and compliance with environmental laws.
- Legal Risk: Risks derived from potential litigation, the validity and enforceability of the contracts, arbitrate rules and gaps or inconsistencies between jurisdictions.

The MAI Clauses may include a specific risk identification section, including procedures for periodic demand forecasting, adjustments to contract terms, and flexibility in response to market changes:

Periodic demand forecasting requires regular (quarterly or semi-annual) demand forecasts, based on market data, historical trends and anticipated changes. These forecasts are essential for making informed production, pricing and financial decisions. In the context of the agreement, the offtaker may be asked to provide regular demand forecasts, which will be reviewed jointly by the parties and allow adjustments to production levels.

Establishing real-time or near-real-time monitoring systems for market conditions and pending government policies that may impact demand, including regular updates of industry trends and macroeconomic indicators, as well as including early warning systems, defining thresholds showing demand approaching critical levels, enables both parties to anticipate demand shifts and adjust accordingly, reducing the risk of sudden demand-driven financial strain.

### G.3.2. Requirements related to risk mitigation strategies

The MAI Clauses must include a general risk mitigation section that identifies strategies such as:

- Insurance: Requirements for insurance coverage to protect against specific risks, such as property damage, business interruption, and liability insurance.
- Contingency Plans: Development of contingency plans for operational disruptions, including backup power supply arrangements and maintenance schedules.
- Hedging Strategies: Financial hedging strategies to manage exposure to price fluctuations and currency risks.

### G.3.3. Supply and demand forecasting adjustment mechanisms

Having in place clear procedures for adjusting volume commitments if demand projections vary significantly from the initial estimates can be key to ensure long-term viability of the agreement. These procedures can include minimum and maximum volume thresholds to accommodate unexpected changes without destabilising the agreement. Establishing a concrete percentage of variance from the initial volume projections that would trigger a re-negotiation of adjustments within predefined limits can work well to address these risks.

If demand projections do not vary significantly or show a temporary change to the circumstances, MAI Clauses shall allow for temporary demand adjustments, within a reasonable (pre-defined or to be negotiated) range, to ensure that the producer can respond to short-term demand signals without facing penalties or breaches. Any adjustments should be communicated with a minimum 30 days advance notification to provide the other Party with sufficient time for adjustment and necessary arrangements.

### G.3.4. Price adjustment, revenue and pricing protection

Risks related to demand fluctuations and market prices should be mitigated by including flexible price mechanisms, protecting revenue for both parties and ensuring financial stability. On the one hand, the parties should define a pricing formula that adjusts with demand changes – this can help ensure revenue continuity for the producer and cost predictability for the offtaker. Indexing prices to market indicators or demand-based price floors can be good options for these purposes. On the other hand, specifying a minimum revenue guarantee for the producer in case demand drops below a certain level will protect against sharp revenue declines, reassuring potential funders of predictable cash flows. An option can be for the offtaker to agree to pay the producer a minimum amount based on the initial contracted volumes in case of demand falling below the contracted minimum threshold. For more information see "*Security of the commitments in the Offtake Agreement"* in Section G.4.2.

### G.3.5. Risk mitigation for demand volatility

MAI Clauses must include contingency plans, that each party can activate in case of important demand shifts (including, where needed, temporary pauses in production, alternative buyers, renegotiation of clauses), specify demand smoothing arrangements, where both parties agree on a rolling average quantity based on past demand to reduce the impact of sudden spikes or drops, and could implement a revenue-sharing model to

share the impact of demand surges or declines, ensuring mutual benefits and reducing risk for both parties.

### G.3.6. Requirements related to the allocation of risks

The MAI Clauses should clearly define the allocation of risks between the parties, specifying which party is responsible for managing and bearing each risk, in light of the outcome of the risk assessment process.

The Parties to the offtake agreement may choose to involve third parties (such as private investors, public investors, insurance companies, financial institutions, or security providers) to distribute and allocate the risks associated with the relationship. While the involvement of these third parties entails additional costs, the Parties must determine how to allocate, it can also help mitigate or cover risks they may be unable to absorb on their own.

## G.4. Terms and Conditions

### G.4.1. Requirements related to contract duration

The MAI Clauses must define the duration of the agreement, including:

- Start Date: The date on which the MAI Clauses become effective.
- End Date: The agreement's expiration date, with provisions for renewal or extension if applicable.
- Early Termination: Conditions under which the MAI Clauses can be terminated before the end date, including penalties or compensation for early termination.

*The Term of the Agreement*

The term of the offtake agreement shall begin on the Effective Date, which may refer to the date of the final signature or any other date mutually agreed upon by the parties.

Where the SAF production plant is not yet developed, and the offtake agreement is signed as a demand signal to the market to help demonstrate that a robust financial commitment backs the project, the Effective Date shall commence on or after the date of steady-state operations, to mean the period after construction when the plant is operating at, a minimum of 51% of the expected nameplate capacity. For certainty purposes, the SAF producer shall deliver to the offtaker a certificate certifying the date when steady-state operations have begun.

In such situations, the parties may also agree to set some obligations during the pre-operation period during which the SAF production plant is being developed. These may include clauses where the producer covenants to acquire and maintain all necessary licenses, permits, and authorisations in the jurisdiction, develop the project as stipulated, and duly inform and report to the offtaker on its progress and development. Parties can agree that the producer will provide, on the agreed frequency, project status reports to the offtaker, including an overview of the progress on the project, its status,

the anticipated timing of development, the status of governmental approvals of licenses, and any other relevant milestones, subject to confidentiality.

Further common commitments can also include access to the site and the right of inspection for the offtaker, which allows them to observe the project's progress and provides trust and reassurance.

Offtake agreements are typically long-term contracts linked to the substantial investments that are required to underpin the economics and financing of SAF projects, and, as a result, they frequently have terms of 10 years or longer to ensure revenue certainty. A term of at least 5 years should be considered (it should ideally contemplate +7 years) as it provides a strong market demand signal, which can be crucial for supporting the project's bankability.

Accordingly, unless terminated earlier in accordance with specific termination provisions or by mutual agreement, the parties shall establish a fixed term to ensure certainty in the agreement's duration. In any case, termination shall not prejudice the rights and obligations accrued under the contract before such termination.

The parties may also provide for the option to renew or extend the initial term for additional periods. Given the regulatory uncertainty surrounding government initiatives such as incentives or other tax-related measures and regulations and potential changes in market dynamics and economic conditions, renewal or extension clauses should be contingent upon reviewing other key contractual elements, such as price, supply, and quantities. For such purpose, parties shall include a procedure to formally renegotiate the terms and conditions that they consider key to adjust and ensure mutual agreement.

### G.4.2. Requirements related to pricing and payment terms

The MAI Clauses must clearly outline the pricing and payment terms, including:

- Pricing Model: Whether the pricing is fixed, variable, or indexed to a market benchmark.
- Payment Schedule: Frequency of payments (e.g., monthly, quarterly), and due dates.
- Currency: The currency in which payments will be made, and provisions for currency exchange if applicable.
- Late Payment Penalties: Penalties for late payments, including interest rates and grace periods.

*Pricing Model*

The contract price is a fundamental element of every long-term SAF EA offtake agreement. While it is often the most sophisticated aspect of the contract, it is also frequently the most challenging or complex to address.

Various pricing models may be considered by the Parties when determining the pricing structure, with the most common being:

- Flat/Fixed pricing: A set price is agreed upon for the specified quantities, regardless of fluctuations in market prices or input costs.

- Fossil index-plus: The price is calculated based on a market index for fossil fuels, with an additional green premium, calculated per gallon and metric ton of $CO_{2eq}$ emissions avoided.
- Cost-plus: The price is determined based on verifiable input costs at the time of production, with a margin added.

Establishing an appropriate pricing mechanism for SAF sales over a multi-year period is a complex undertaking that requires careful consideration of the parties' specific circumstances and the prevailing market conditions at the time of contract negotiation. The final price formula, representing the negotiated agreement between the parties, typically remains a closely guarded commercial secret.

The flat, or "fixed" pricing method places the greatest risk of bearing cost variations on the producer. Parties should acknowledge the challenges of fixed pricing on the parties. For FOAK plants that are either the first facility proposed to have commercial scale production using a new technology, the costs will likely be higher than future projects that can be either larger scale or more efficient due to lessons from the early pioneers or projects. Contracts should acknowledge this probable pricing scenario and ideally include some mechanism that supports the buyers over the contract duration such as favourable pricing options or prioritized supply access for new refineries operated by the same supplier. See Section 2.3.1.

The fossil index-plus model[7] reportedly has been adopted by a number of industry participants. In practice, the price premium paid for SAF has been reported to be at least twice that of traditional jet fuels[8], although government support through tax incentives and other subsidies has helped bridge the gap. However, the increasing disparity between regular jet fuel prices and SAF feedstock and production costs has made implementing this model more challenging.

As a result, the cost-plus model is a proven model for the industry, as it allows for a more balanced distribution of risks between the parties and provides greater price certainty. Additionally, it is common for parties to include Price Floor and Price Ceiling clauses to enhance predictability.

*Security of the commitments in the Offtake Agreement*

Long-term offtake security is a critical priority for sellers, lenders, and other stakeholders involved in the financing of SAF projects. To ensure a reliable revenue stream, sales agreements often impose firm offtake obligations on buyers, commonly structured as take-or-pay commitments.

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[7] Scaling Clean Technology Offtakes: A Corporate Playbook for Net Zero (Page 17) White Paper - https://www.weforum.org/publications/scaling-clean-technology-offtakes-a-corporate-playbook-for-net-zero/

[8] Sources include: https://www.iata.org/en/iata-repository/pressroom/fact-sheets/fact-sheet-fuel/ and SAF price assessments for the US SAF market | Argus Media

Under any of the previously presented pricing models, a key aspect of the pricing or purchase clause is to structure it as a take-or-pay provision, or a functional equivalent. In take or pay arrangements, buyers agree to either “take” the EAs derived from the SAF produced or to “pay” for them. ‘Take or pay’ is, in essence, a contract provision that obligates the buyer to take and pay for the EAs or otherwise pay an agreed price for any EAs not taken.

This framework guarantees revenue stability for the producer, securing payment for the agreed production volume and covering the costs associated with SAF production. With a take-or-pay clause, the purchaser is obligated to take the EAs for the specified SAF volume or, alternatively, pay for them, thus satisfying their obligations through either option. Consequently, a purchaser's failure to take the EAs does not constitute a breach of contract, which would otherwise trigger remedies or termination by the producer. Instead, it activates the obligation to pay without taking possession of the EAs.

It is essential to clearly stipulate in the clause whether the take-or-pay obligation applies annually or over alternative time periods. Additionally, the Parties may agree to adjust the price that the purchaser pays if they opt to take the EAs, potentially lowering it to cover fixed production and financing costs, among others, as the producer may retain the option to sell any unsold EAs to third parties. In such cases, the methodology for calculating the adjusted price should be clearly outlined.

Take-or-pay provisions may not always be absolute and can be adjusted to apply to a pre-defined percentage of the annual contracted volume of EAs, but should, however, remain on high levels to underpin the required substantial financing.

To enhance fairness, the take-or-pay clause may include a make-up quantity of EAs, allowing the seller to claim up to the non-taken EAs within a defined timeframe.

Furthermore, if a take-or-pay clause is included, the Parties should specify its treatment under a force majeure event, as this is one of the cases where the buyer may be excused from liability for non-performance of its take-or-pay obligation. Given that the obligation is structured in the alternative (take or pay), a force majeure event may prevent the buyer from taking the EAs but not from paying for them (e.g., if registry operations are disrupted). In such cases, the Parties may agree to defer payment until the end of the event preventing the buyer from taking the EAs.

*Price Adjustment*

Although the pricing terms established at the outset of the agreement may reflect the parties' initial expectations, changes in circumstances may render these terms unsuitable over time. Consequently, the parties may wish to retain the right to reopen or renegotiate the pricing terms under certain conditions. Price reopener clauses are typically used to address instances where the agreed pricing becomes inequitable or overly burdensome for one party. This may occur when the reference index or source becomes invalid or when there are significant or substantial changes in market conditions or prices.

While the determination of what constitutes "significant" or "substantial" changes in economic circumstances may be inherently vague or subjective, the parties may choose to establish reference criteria or guidelines to provide clarity. For example, they could agree on a specific percentage change in the price within a defined period, such as a

certain percentage shift in the contract price over a given timeframe. This approach would help establish a measurable threshold for triggering the price revision process, offering greater predictability and reducing ambiguity in the application of the clause.

Such clauses generally trigger a negotiation process to restore the pricing to fair and equitable levels for both parties. This request must be made in writing, in accordance with the notice requirements set out in the OA and supported by information demonstrating the belief that the economic circumstances have significantly changed. Upon receiving the notice, the Parties are required to enter into good faith negotiations to determine whether the changes justify a revision of the contract price provisions, aiming to reach a fair and equitable solution. If the Parties fail to agree on a revised pricing formula within a set period, the matter may be referred to arbitration for resolution.

This price revision mechanism ensures flexibility by allowing for price adjustments in response to substantial economic changes, while promoting transparency and fairness in the process, with arbitration as a fallback mechanism if negotiations are unsuccessful.

In case of reference to arbitration, the parties should be mindful that price review clauses providing limited guidance on the factors to be considered during a price review process may pose a significant risk. For example, the clause referring to a "fair and equitable revision" of the contract price may lack specific parameters. Price review clauses that do not offer any clear instructions or criteria for the review could expose the parties to the risk of undesirable outcomes. While the absence of such guidance may not pose significant issues if the decision-making power over price adjustments remains with the parties, complications may arise if informal discussions fail and the matter is escalated to arbitration. In such instances, parties may feel uneasy entrusting this crucial decision to an external party whose authority may not be adequately constrained by the contract's terms. To address these concerns, the parties limit the discretion of arbitrators or experts, imposing constraints on structural changes to the price formula and establishing quantitative limits on the allowable price adjustments.

*Currency*

The payment clause must also identify the currency of payment and, if applicable, define the exchange rate that the parties shall apply in case of any currency conversion or the mechanisms that govern such currency conversion to mitigate risks. In fact, currency is a vital part of international SAF supply contracts, and parties shall not leave room for ambiguity in this regard. As a result, contracts adopt a prescriptive approach, explicitly defining the currency to be used for calculating the contract price, issuing invoices, and making payments.

Given that offtake contracts are long-term agreements and that the exchange rate between different currencies is likely to fluctuate over the duration of the contract, it is advisable to include mechanisms to protect the buyer and seller from potential devaluations in the currency chosen, such as:

- Currency option provisions: Parties can provide the possibility to switch from the buyer's currency to the seller's currency if the former goes above or below a specified rate.

- Shared risk provisions: if the exchange rate of the currency agreed upon by the parties fluctuates over a given amount, both parties can agree to support the impact on the price equally.
- Freezing provisions: Parties can decide to set a fixed exchange rate for the duration of the contract (or to be reviewed for each subperiod) to protect themselves from actual market fluctuations.
- Indexation provisions: Parties can agree to link the exchange rate to the performance of an index to provide further stability.

*Payment Schedule*

Payment provisions are typically outlined alongside currency provisions, often in considerable detail. These provisions specify the timing, location, and method of payment by the buyer in response to the seller's invoice. Contracts commonly establish various payment methods and timeframes, with the payment obligation generally considered fulfilled once the funds are received by the seller's nominated bank.

It is common for the parties to agree that the buyer will pay the seller a provisional price for amounts due at the beginning of an agreed-upon period or sub-period. The parties may further agree to divide the annual period into quarters, trimesters, or other intervals to facilitate a more consistent financial flow.

This provisional payment is subsequently adjusted to reflect the actual price (based on the agreed pricing mechanism) and any applicable price modifications, such as price ceilings or floors, after the formal delivery date of the EAs. Any difference between the provisional payment and the final amount is either credited or refunded, as appropriate, following the conclusion of each period.

The offtaker must pay each invoice according to the payment terms (including timing, currency, and methods of payment) provided in the contract's payment provisions. For such purpose, each party must provide the other party with payment details, the account holder's name to which such payments are to be made, and the name of a contact person responsible for receiving such payments.

*Late Payments Penalties*

A late payment penalty clause must clearly define the triggering event when any payment due under the agreement is not made within the specified timeframe. The parties can agree to allow a specified grace period following written notice to provide the outstanding payment before exercising the agreed penalty. The penalty amount must be explicitly calculated, either as a fixed amount or a percentage of the overdue sum, accruing daily or monthly until full payment is received. Parties may also agree to cap the penalty to limit the total cumulative late payments.

*Dispute of Payments*

Disputed invoice amounts are a common occurrence. OAs shall also include clauses for resolving payment disputes, including the dispute notice and the information that needs to be provided to dispute a payment. Contracts generally require that any disputed sums be paid in full by the buyer on a provisional basis, pending resolution and possible later adjustment. These agreements also provide protection for the seller in the event of payment failure by the buyer. Common safeguards include the accrual of late

payment interest and the seller's right to suspend deliveries. If the payment issue remains unresolved beyond a specified period (commonly exceeding a certain number of days from the invoice due date), the seller may be entitled to terminate the contract due to the buyer's prolonged payment default. Ideally, parties shall aim for amicable resolution of disputes through mutual discussions before resorting to arbitration or litigation alternatives.

*Payment Guarantees*

To ensure the offtaker's revenue stream and demonstrate a stronger bankability signal to the market, the parties can agree for the purchaser to provide guarantees such as standby letters of credit.

To ensure the robustness of the commitment, such letters of credit shall be irrevocable and ideally revolving throughout the duration of the contract to cover the amounts payable to the purchaser. The amount shall be tied to the (projected) price payable for a set period or sub-period, such as yearly or as agreed by the parties in the payment schedule. If the offtaker fails to make payment as per contractual terms, the producer has the right to draw on the letter of credit up to the covered amount. The issuing bank would then be obligated to pay the producer, mitigating the risk of non-payment.

Another possibility is to bring in private insurers or underwriters, offering enforceable commitments to back up the producers against the buyer's failure to pay. Insurance options range from those offered by traditional financial institutions to specialised carbon credit insurers, designed to mitigate financial risks for buyers in cases of under-delivery or non-delivery by the producer. These insurance solutions provide an additional layer of due diligence and quality assurance, offering legally binding protection that reduces financial uncertainty. Flexible claim options, including cash payouts or replacement credits, enhance adaptability. Insurance can be secured at any stage before credit delivery and applies to projects certified by recognised carbon standards with independent validation.

### G.4.3. Requirements related to delivery and supply obligations

*Delivery obligation*

The seller must warrant to the buyer that it will comply with core SAF production and delivery obligations of the EAs through the agreed channel (i.e. retirement statements through the approved B&C Registry). There must be a clear and unequivocal commitment that the seller will produce a volume of SAF sufficient to meet its obligations under the Agreement and demonstrate that the product EAs been delivered to a buyer.

The producer is obligated to deliver to the offtaker the amount of EAs stated for every contract period or sub-period on the agreed delivery dates. On (or prior to) the agreed Delivery Date, the producer shall provide the offtaker with the necessary documentation (certificates and/or other necessary documents, such as Retirement Statements) to prove the ownership of EAs and rights provided by them.

The EAs (to be) generated from the Project shall have been approved as eligible for registration on a public registry by a third-party verifier with relevant experience, capabilities, certifications, and capacity (e.g. The RSB Book & Claim Registry).

*Inability to meet the Delivery obligation*

In the event the Seller anticipates that it will be unable to deliver to the Buyer the agreed EAs linked to the SAF production for any given time period, the Seller shall provide prompt written notice to the Buyer and use all reasonable efforts to propose alternatives aimed at ensuring that the Buyer has access to similar EAs from the missed SAF.

The ability to modify (either decrease or, in some cases, increase) the volume of SAF produced and the volume of EAs to be taken by the buyer can become crucial in certain situations, such as market disruptions that could result in the need for downward adjustments in quantities. Such issues can be mostly resolved through mutually agreed rescheduling between the parties.

Suppose the parties cannot mutually agree on a course of action within an agreed-upon period. In that case, the Buyer may be entitled to suspend the Agreement upon written notice to the Seller until the Seller provides written notice of its return to sufficient delivery capabilities. Suppose the Buyer has paid in arrears or advanced any payments to the Seller. Upon such suspension, the latter may return any payments received from the former for undelivered products as of the date of suspension.

### G.4.4. Requirements related to Force Majeure

The MAI Clauses shall include a comprehensive force majeure clause that:

- Defines force majeure events, such as natural disasters, wars, pandemics, or government actions that prevent the fulfilment of contractual obligations.
- Outlines the process for declaring a force majeure event, including the notification requirements to trigger its effectiveness.
- Specifies the remedies available upon a force majeure event, including the duty to mitigate damages or the suspension or termination of the agreement.

*Definition and Scope*

The term 'force majeure' refers to events that might impact, hamper, or otherwise prevent the parties' ability to perform their contractual duties and obligations under the offtake agreement. Force majeure encompasses events that are beyond the parties' control and could not have been reasonably anticipated or, even if foreseen, would have been unavoidable by them.

What qualifies as force majeure in a specific contract is determined by how the term is defined within a particular agreement. Similarly, the implications of a force majeure event on the parties' rights and obligations also depend on the contract's explicit provisions.

Due to the long-term nature of the parties' commitments in an offtake agreement, the wording of a force majeure clause is particularly significant. Careful consideration should be given to the events listed in the clause, as these clauses tend to be construed narrowly or even strictly. In fact, as force majeure clauses result from a contract mutually agreed upon by the parties, the courts are unlikely to expand on the definition given by them in case of dispute.

Including a specific set of examples of force majeure events, followed by the phrase "*or any other causes beyond a party's reasonable control*," helps cover a broad range of events. When general wording follows a specific list of events, some courts might interpret these provisions narrowly, meaning their application will be limited to events analogous to those listed. In other cases, courts might be more expansive and look at the actual event at issue to assess whether it qualifies as a force majeure event. The common element to all listed events is that they should be unforeseen (and even if foreseen, unavoidable) beyond the parties' control and that they render the obligations under the contract impossible to carry out as originally planned.

For illustrative purposes, events that may qualify as force majeure events include: "*riot, terrorism, insurrection, natural disaster, pandemic, epidemic, strike or labour dispute*"

Typically, economic circumstances that lead to insolvency, an inability to pay, or make the agreement commercially unfeasible (whether due to a party's circumstances or a broader economic collapse) are not considered force majeure events and are often expressly excluded. For instance, events such as internal operational failures and other situations that could have been prevented with reasonable diligence and precaution will not be deemed as "beyond reasonable control". However, the unpredictability of a counterparty's insolvency or ability to meet its financial commitments is particularly relevant over long-term offtake contracts. These issues are often addressed in clauses related to 'events of default' or 'material adverse change' (MAC), which are linked to the parties' rights to suspend or terminate the agreement.

Acts of Government and/or changes in Law may be addressed in a separate clause, as they may not render the parties' obligations impossible to perform, but can significantly affect costs and operational aspects. Consequently, such events may warrant extensions to performance timelines or adjustments to pricing to account for the new impact on the cost structure or financial obligations.

*Obligations of the Parties*

The burden of proof lies with the party claiming force majeure. The claiming party must demonstrate that the event qualifies under the contract's definition and comply with any notice requirements, including deadlines and formalities.

The force majeure clause will typically set forth the actions required of the Parties in the event of a force majeure occurrence. In general, the party affected by the event shall promptly notify the other party, either in accordance with the specific notice requirements outlined in the force majeure clause or pursuant to the general notice provisions stipulated in the contract.

The clause shall establish the timeframe within which this notice must be provided by the affected party, ensuring that both parties are informed and can take steps to address the potential impact on their contractual obligations.

Parties shall also commit to using all reasonable efforts to remedy the inability to perform the contractual duties impacted by the force majeure event and resume full performance as soon as practicable. All other duties, to the extent that their performance is not impeded by the force majeure event, shall continue to be performed.

*Impact on the Contract's Performance*

A force majeure clause in a commercial offtake agreement is generally designed to benefit both parties, enabling the affected party to suspend or terminate the contract if uncontrollable events occur. In practice, however, the seller (responsible for delivering the goods and services) is usually more likely to invoke the clause, especially since the buyer's inability to pay is excluded from the definition of force majeure and falls under default events or MAC.

The consequences of invoking a force majeure clause can vary between contracts. Depending on the impact and duration of the event, the parties can anticipate several scenarios.

A force majeure claim typically requires the affected party (whether the buyer or the seller) to provide notice, which then excuses them from fulfilling their obligations under the relevant contract. For instance, in the case of a buyer invoking force majeure, they may be relieved from their take-or-pay obligations. In most contracts, this would result in the suspension of the delivery of the EAs for the duration of the force majeure event. Initially, the parties might delay performing the obligation affected by the force majeure event, which resumes once the event passes. For longer periods of time, force majeure events often lead to a temporary suspension of contractual obligations. For such cases, parties may agree to extend the agreed-upon terms.

If the event is long-lasting, the force majeure clause should provide for the possibility of termination following a prolonged suspension, which may be at the discretion of either party or only the unaffected party. This means that the parties are entirely released from their obligations under the contract due to an absolute inability to perform it.

In any event, a party claiming force majeure is generally required to make reasonable efforts to mitigate the impact of the event and facilitate the eventual resumption of normal performance under the contract. Even before normal performance resumes, contracts often stipulate that the parties must continue to perform their obligations to the extent that is possible under the force majeure circumstances.

The parties shall clearly define the timeframes and periods for each scenario.

The Parties may mutually agree upon specific conditions for the performance of obligations affected by a force majeure event. For instance, where a force majeure event hinders the ability to obtain or maintain a particular certification, the Parties may consent to temporarily waive this requirement. Following the conclusion of the force majeure event, the production of SAF during the affected period may be retroactively certified.

Alternatively, if available, the Parties may utilise other certification methods or bodies throughout the duration of the force majeure event impacting the primary certifier. This approach aims to prevent operational disruptions while preserving existing standards. To ensure that this exceptional remedy is not exploited, the Parties may establish a defined duration for its application.

Termination due to force majeure is often stated to be without liability. However, arranging certain payments upon termination may still be appropriate, depending on the parties' capital investment in production or infrastructure and how the risk of capital loss has been allocated in the contract.

### G.4.5. Requirements related to termination clauses

The MAI Clauses must detail the conditions under which it may be terminated, including:

- For Cause: Termination due to a breach of contract or failure to meet performance obligations
- Without Cause: Termination by mutual agreement, with specified notice periods and compensation terms.
- Consequences of Termination: The financial and operational consequences of termination, including settlement of outstanding payments, return or transfer of assets, and dispute resolution.

*Termination in long-term OAs*

Termination of a contract before the end of its anticipated term represents a significant and often undesirable step in a long-term commercial relationship. There may be circumstances where continuing with the contract becomes untenable. The offtake agreement must expressly provide the affected party with the right to terminate the contract under certain conditions, reflecting a long-term perspective on potential disruptions to the agreement.

*For Cause*

Offtake agreements typically include termination clauses for default events such as material breaches, insolvency, non-payment, or non-delivery. Additional triggers may include violations of guarantor obligations, sanctions, anti-bribery, or anti-money laundering regulations.

A cure period allows the defaulting party to remedy breaches before termination, such as a grace period for non-payment or financial assurances in insolvency cases. Termination is not immediate. Clear notice requirements, including the method and period, must be established. Legal remedies, including damages claims, remain available post-termination.

*Without Cause*

Termination without cause is rare due to the financial commitments involved. It typically requires prior notice and compensatory provisions to protect the producer's investment when permitted.

*Consequences of Termination*

Termination clauses must define, including outstanding rights, outstanding payments and reimbursements. Seller liability for delivery failures varies, with some agreements compensating buyers for direct losses while excluding consequential losses. Liability caps may limit exposure, and confidentiality or other obligations often survive termination.

*Termination Process*

Termination must require formal notice, with contracts specifying the required form, content, and timing. Some agreements include multi-step procedures, such as a notice of intent, an amicable consultation period, and a final termination notice.

## G.5. Performance Metrics and Monitoring

### G.5.1. Requirements related to key performance indicators (KPIs)

The MAI Clauses must establish KPIs for monitoring the performance of the agreement, including:

- Fuel Production: Metrics for measuring the fuel produced and delivered, such as capacity utilisation, efficiency ratios, and downtime.
- Financial Performance: Metrics related to the financial aspects of the agreement, such as payment compliance, cost overruns, and return on investment.
- Compliance Metrics: Metrics for tracking compliance with environmental, regulatory, and operational standards.

For the successful financing of a production project, demand signal recognition can play an important role. In practical terms, prospective lenders prioritise the SAF Project's cash-generation ability to reimburse the financing. As such, the project's ability to generate cash flow should be assessed against potential risks to understand the ability of the project to reimburse the financing appropriately throughout its lifetime and under different tested scenarios.

If the financial model is made part of the agreement, it can have contractual value. Third parties can also audit it, which provides a stronger and more robust signal to the market, especially to financiers and potential lenders.

### G.5.2. Requirements related to monitoring and reporting

The RSB Registry transaction history in the seller's and buyer's accounts is an official record of the EAs supplied. The MAI clauses shall refer to these transaction history lists for reporting of the supply of EAs.

For each period or subperiod of time, the Seller shall calculate and report to the Buyer the EAs arising from the SAF volume according to the agreed 'Allocation Methodology' and deliver the report to the Buyer.

The Seller shall also undergo an independent sustainability audit report and financial audit reports yearly.

- The Sustainability Audit Report shall cover the type of feedstock and origin of SAF produced by the Seller, any applicable sustainability certifications, any

emissions (GHG or otherwise) reductions claimed, and the allocation methodology used for its calculation[9].

- The Financial Audit Report shall review the Seller's annual (consolidated) financial statements and calculate the pricing methodology agreed upon by the Parties.

Once the EAs have been decoupled from the SAF, they shall be registered and stored using RSB's Book & Claim System. Parties may rely on third-party Issuing Bodies to verify and check the registration of EAs and avoid any double issuance and double-counting risks. The Seller shall also provide the Buyer with documentation related to the proof of physical transfer of the SAF.

*Books and Records*

Both parties shall, for the duration of the contract, keep accurate and proper documentation of any material related to compliance with and performance under the offtake agreement, applicable laws and other governmental requirements (if applicable).

The Buyer or an independent professional (i.e. consultant, accountant, auditor, or any third-party expert agreed by the parties) shall conduct an audit of the producer's records to verify compliance with the offtake agreement. Such a request for verification shall be communicated with reasonable advance notice and performed in such a way that it does not disrupt or unreasonably interfere with the producer's day-to-day activity or operations.

### G.5.3. Dispute Resolution

Dispute resolution provisions play an important role in this context, typically providing for recourse to third-party dispute settlement to protect the parties from the inefficiencies of protracted negotiations.

Disputes arising in the course of long-term contracts, including those for SAF EA offtake agreements, are a common part of commercial relationships. While the ideal resolution is amicable negotiation without external involvement, in practice, parties often resort to third-party dispute resolution mechanisms to expedite and effectively resolve disagreements.

Litigation before national courts is rarely used in international commercial contracts, as parties typically avoid submitting disputes to the home jurisdiction of the opposing party. For example, a buyer of SAF located in a certain jurisdiction may be reluctant to submit a dispute to a court in the seller's jurisdiction. Instead, alternative dispute resolution (ADR) mechanisms, such as arbitration, expert determination, mediation, and negotiation, are more commonly employed. In ADR, the parties define the role of

[9] This audit is separate from any annual surveillance audit required by book and claim systems and is required to verify that the contract's sustainability requirements have been met. However, parties may agree to use regulatory or RSB certification audits to satisfy this requirement.

external actors—whether arbitrators or experts—who act as decision-makers. In mediation, by contrast, the mediator helps the parties reach a settlement without imposing a binding decision.

ADR clauses in SAF EA offtake agreements generally specify the applicable method. In some agreements, certain disputes, such as those related to technical matters like SAF quality, are designated for expert determination. Other agreements may allow the parties to choose between arbitration and expert determination, depending on the type of dispute.

Arbitration is widely favoured in international commercial contracts due to its flexibility and ability to avoid the biases inherent in national courts. Arbitration allows parties to select the arbitrators, the location, the applicable rules, and the language of the proceedings. Parties may also tailor the arbitration process to their needs, such as by agreeing on timeframes, confidentiality levels, and other procedural aspects. The outcome of arbitration is binding, and recourse against an arbitral award is typically limited, with challenges only available on narrow grounds such as violations of due process or public policy.

Efforts to increase efficiency in arbitration can include bifurcating the process (dividing it into separate phases), setting time limits for decisions, and agreeing on document production scopes and cost allocation. Parties can also reduce written submissions or hold virtual hearings to streamline the process.

### G.5.4. Other Contractual Terms

In addition to the provisions discussed above, several other clauses reflecting the key commercial choices of the parties can be found in long-term SAF production offtake agreements. These provisions include, inter alia, the allocation of tax responsibilities between the parties, limitations of liability, assignment of rights, notices, waivers, and confidentiality arrangements (typically requiring parties to keep all terms and conditions contained in, and related to, the contract in strict confidence).

In parallel with negotiating specific commercial aspects of the deal, parties to long-term SAF production offtake agreements need to take a long-term view in anticipation of market changes that may affect their contractual relationship. Responsiveness to market changes (such as structural or regulatory shifts) is mainly reflected in the parties' ability to adjust contract terms during the lifetime of the agreement.

### G.5.5. MAI Clauses Appendices

#### Glossary of Key Terms

An appendix should provide definitions for all technical, legal, and financial terms used in the MAI Clauses. Examples include:

- Capacity: The maximum output that the fuel generation facility is capable of producing, measured in metric tonnes or another relevant metric.
- Curtailment: The reduction of fuel output below the facility's maximum capacity due to external factors such as grid constraints.

- Offtaker: The entity purchasing the fuel generated under the MAI Clauses.

### Template Forms and Schedules

An appendix should include standardised templates and forms to be used throughout the lifecycle of the MAI Clauses, such as:

- Pricing Schedule: A detailed schedule outlining the pricing structure and payment terms.
- Delivery Schedule: A timeline for fuel delivery, including milestones for capacity expansion or upgrades.
- Compliance Checklist: A checklist for tracking compliance with regulatory and environmental standards.

## Annex I - Information submitted to the RSB Book and Claim Registry during EA Registration and electronically passed through the Registry to buyers.

| Name of variable | Explanation (where required) |
|---|---|
| BCU ID | Unique identifier of the Book and Claim Unit |
| Amount of BCUs – | Equivalent to the metric tonnes of neat SAF supplied |
| $CO_{2eq}$ reduction (t) | Calculated as described in Section 4 of the RSB Book and Claim Manual |
| $CO_{2eq}$ reduction (t) / EA – | the $CO_{2eq}$ reduction divided by the number of metric tonnes supplied |
| LCA value (g $CO_{2eq}$/MJ) | Verified life-cycle assessment (LCA) value calculated using the methodology defined by the certification scheme applied. Also sometimes referred to as Carbon Intensity |
| $CO_{2eq}$ Reduction (%) | Calculated as described in Section 4 of the RSB Book and Claim Manual "% GHG emission reduction compared to fossil baseline" |
| Amount of product (t) | Mass of product (e.g. SAF) associated with the BCUs supplied |
| Amount of product (MJ) | Energy Content of product associated with the BCUs supplied |
| Sustainability certification | The certification scheme used to certify the sustainability of the fuel. i.e. EU RED, CORSIA or RSB Global |
| Fossil baseline (g $CO_{2eq}$/MJ) | Standard LCA values for the counterfactual fossil fuel. These are defined by the certification scheme utilised to certify the fuel. Fossil baselines are 90g $CO_{2eq}$/MJ for RSB Global, 94g $CO_{2eq}$/MJ for EU RED, and 89g $CO_{2eq}$/MJ for ICAO CORSIA. |
| Date of product production | Date the fuel was produced |
| Country of blending | The country in which the fuel was blended with fossil fuel |
| Feedstock (raw material) | Description of the feedstock |
| Feedstock conversion process | Description of the conversion technology utilised |
| Feedstock country of origin | Country where feedstock has been sourced |

| | |
|---|---|
| Location of physical end product delivery | Airport where the physical fuel was delivered and used |
| Declaration of incentives | List of any incentive received by suppliers throughout the supply chain |
| Country where EA will be claimed | Country where the Scope 1 reduction will be claimed |
| Type of reporting | Declaration that the reporting type is voluntary |
| EA registration date | Date on which the EA was registered |
| EA expiration date | Date on which the EA expires |
| EA status | Indicates the status (e.g. in transit, retired) of the EA |