

Pioneering early SAF transactions

Takeaways and lessons learned

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This report outlines Deloitte's recent agreements with airlines to purchase sustainable aviation fuels and details our early experiences and insights, as well as considerations for other companies entering the SAF market.

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Our motivation

Deloitte is committed to doing our part to mitigate climate change. For us, this means demonstrating leadership through tangible climate action with our clients, as an organization, by our people, and for the broader community. As part of the WorldClimate strategy, we are committed to greenhouse gas (GHG) reduction goals that have been validated by the Science Based Targets initiative (SBTi).¹ We are also engaging ecosystems to create innovative climate solutions at systems and operational levels.

Business travel, the vast majority of which is air travel, has historically been one of Deloitte's largest sources of emissions, accounting for nearly 50% of baseline (i.e., pre-pandemic) emissions.² As part of our emissions reduction goals, we've committed to reducing our business travel emissions from 2019 levels by 50% per FTE by 2030. To get there, we are prioritizing real, tangible, in-sector emissions reductions, not offsets.³ This means that, in addition to increasing the percentage of our virtual work and business meetings, we're accelerating the transition to lower-emissions aviation so that when we are onsite with our clients and teams for

the moments that matter, we do so with a much smaller emissions footprint. While there are several promising innovations that can help decarbonize the aviation sector,⁴ sustainable aviation fuel (SAF) has the opportunity to be a major solution for reducing aviation emissions in the near term.

SAF is produced from sustainable feedstocks including waste materials, such as used cooking oil, agricultural residues, and municipal solid waste, or potentially from purpose-grown cover crops like carinata. It currently has the potential to reduce the carbon intensity of flying by up to 80%, and by more in the future.⁵ Although SAF's in-flight combustion emissions are comparable to conventional jet fuel's, SAF results in significant emissions savings over the life cycle of the fuel. SAF is one of the most promising near-term options to reduce the climate impacts from aviation, yet it only makes up about 0.01% of jet fuel supply today. This is in large part due to its high cost.

As the SAF market is nascent and existing supply is limited, prices are quite high today. A strong demand signal from corporate buyers and airlines could scale SAF supply and bring down its cost. This is similar to what we saw in the early years of renewable electricity and electric vehicle markets



and requires similar (but ideally faster and larger) demand signals from customers to scale and make a significant impact on the aviation sector.

In Deloitte's first major step toward advancing the SAF market, we purchased the environmental attributes of more than half a million gallons of SAF, which includes the right to claim the associated Scope 3 emissions reductions. SAF certificates (SAFc), as originally proposed by the World Economic Forum (WEF) Clean Skies for Tomorrow (CST) coalition,⁶ could represent these environmental attributes in the future (see figure 1 for more on Scope 3). Like a renewable electricity certificate (REC), a SAFc could represent the environmental attributes of a fixed volume of neat (unblended) SAF, would be decoupled from the physical fuel volume, and would be sold or claimed separately.

The SAFc is intended to create a publicly accepted and approved way for companies such as Deloitte to invest in (and claim the emissions reductions from) the use of SAF through a digital certificate system without ever owning or handling the physical fuel. The SAFc system does not yet exist, so while we did reduce emissions from business travel, our pilot transactions with multiple airlines in 2021 did not create SAF certificates, and we did not reflect these reductions in our GHG inventory.⁷ However, we hope that our experience can encourage more investment in this nascent market and further inform the design of a SAFc system. We also hope that SAFc can unlock new funding to reduce SAF's price premium in the marketplace and accelerate the decarbonization of the aviation sector. Once a functional SAFc registry is established, Deloitte supports recognition for SAFc

by the Greenhouse Gas Protocol and SBTi.

Several airlines have individually explored SAF purchases, but due to airlines' tight profit margins and SAF's high price premium, airlines could benefit from support (especially from their corporate customers) to purchase significant volumes of SAF. Deloitte and other climate leaders can be instrumental in advancing SAF production by demonstrating demand and the ability to fund it. Ideally, voluntary SAFc purchases support production of additional SAF beyond the quantities that airlines would purchase without partnering with their customers.

In spring of 2021, we collaborated with three airlines (American Airlines, Delta Air Lines, and United Airlines) on SAF pilot transactions. We also expect to complete additional transactions with other airlines before the end of 2021. These pilots reinforce our commitment to catalyzing a robust SAF market and have provided valuable insights in the process that we hope will support others in their SAF investment journeys.

To build on these pilot transactions, Deloitte is helping inform and enable more investment in SAF. As a founding member of the Sustainable Aviation Buyers Alliance (SABA),⁸ Deloitte is committed to accelerating the aviation industry's path to net-zero air transport by driving investment in SAF, catalyzing innovation in SAF production, and engaging in policymaking to support this solution. We firmly believe that to catalyze the SAF market, climate-focused customers need to be willing to lead and concretely signal demand for more sustainable aviation.

Our experience

Through our pilots, we gained insight into the sustainability considerations and transaction logistics for future SAFc transactions. We found that airlines were eager to collaborate with us in the spirit of working together to meet our collective climate goals.

With these pilots, we purchased the right to claim Scope 3 emissions reductions associated with more than 630,000 gallons of SAF. The SAF was produced from waste oils, including used cooking oil and tallow, through a conversion pathway called Hydroprocessed Esters and Fatty Acids (HEFA). Over its lifecycle, this SAF resulted in more than 5,500 metric tons of carbon dioxide equivalent (CO₂e) of emissions reductions relative to conventional jet fuel. This saving equates to the emissions from more than 19,000 economy-class passengers flying one way from New York City to Los Angeles.⁹

I. Sustainability considerations

Calculating and disclosing emissions reductions

Organizations increasingly account for and report on their Scope 1, 2, and 3 emissions, in addition to actively working to reduce those emissions. When airlines burn jet fuel, the emissions that result are their direct operational, or Scope 1, emissions. For airline passengers and air freight customers, these same emissions are considered Scope 3 (or indirect supply chain) emissions. The GHG Protocol assigns responsibilities for the same emissions to multiple parties (i.e., Scope 1 and 3 emissions from the same supply chain). As an example, when airlines replace conventional jet fuel with SAF in their aircraft, airlines can claim the emissions reductions associated with that switch within their Scope 1 disclosure, and customers can claim them as part of their Scope 3 disclosure.

Emissions reductions from SAF are calculated through a lifecycle assessment (LCA), in which the emissions at every stage of the SAF supply chain, from feedstock production to fuel burn in an aircraft, are calculated and compared to an equivalent lifecycle of conventional jet fuel. The emissions reductions from SAF do not occur at the point of fuel burn, but rather are a function of substituting recycled carbon (e.g., sequestered CO₂ from biomaterials, and ultimately from carbon capture) for new carbon (fossil fuels), so a comprehensive lifecycle analysis is needed to calculate the emissions reduction benefit from SAF. There are multiple common ways to calculate emissions reductions, which complicates analysis and reporting.

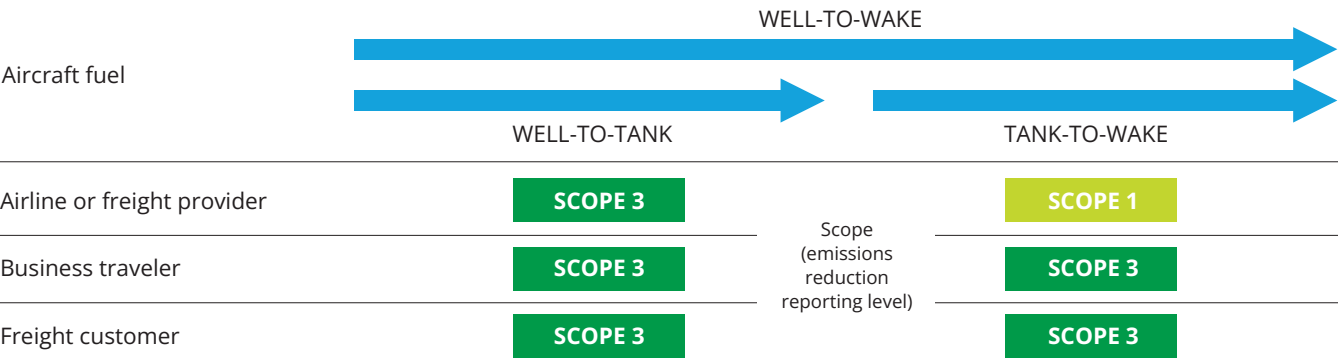
The two most common calculation methods are known as “well-to-wake” and “tank-to-wake” (see figure 1). The “well-to-wake” method includes emissions from the production of feedstock to the exhaust of the aircraft. This method includes both upstream supply chain and direct emissions

within the SAF lifecycle. The “tank-to-wake” method includes only emissions from the combustion of fuel and does not include upstream emissions from feedstock and SAF production and distribution. Currently, only reporting of “tank-to-wake” emissions are mandatory under the GHG protocol, but the revised SBTi aviation sector guidance recommends a full “well-to-wake” calculation methodology.¹¹ For Deloitte, updating our reporting methodology to include the upstream “well-to-tank” data (plus “tank-to-wake”) will add at least 15% to reported business travel emissions,

How do you tell if SAF is sustainable?

Strong climate solutions avoid creating other negative impacts, such as pressure to develop on critical habitats. Companies can benefit from assurances that SAF’s “sustainable” label has integrity, from emissions calculation methodologies to feedstock sustainability criteria. The International Civil Aviation Organization (ICAO), the UN body for aviation, defines SAF sustainability across 2 themes or criteria, with 10 pending, one of which is greenhouse gas emissions intensity.¹⁰ ICAO’s Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) identifies SAF, certified to one of two approved sustainable certification schemes (SCSs), as valid to achieve the sustainable label. The Roundtable on Sustainable Biomaterials (RSB) and the International Sustainability and Carbon Certification (ISCC) both have approved SAF certification standards under ICAO CORSIA.

Figure 1. Common LCA and emissions reporting scopes for aircraft fuel¹²



if radiative forcing (emissions impact from water vapor and contrails) is excluded.

Depending on the way in which SAF and its associated claims are used, the reference methodology can differ. For instance, if an airline were to purchase SAF and claim the associated emissions reductions under a regulatory or compliance framework like ICAO CORSIA obligations, it would use the “tank-to-wake” method to account for its fossil fuel emissions. Upstream emissions from extraction, refining, and transport of the fuel are not accounted for by ICAO CORSIA because the compliance program was established to address direct emissions only. But if the same airline were disclosing their SAF use as part of a voluntary program, such as to meet emissions reduction targets approved by SBTi, they would need to use the “well-to-wake” method. In the long run, it is reasonable to expect that ICAO will adopt the full “well-to-wake” approach as it allows for an apples-to-apples comparison between conventional jet fuel and SAF. “Well-to-wake” has already been adopted by SBTi as the preferred approach.

For voluntary SAF purchases, the “well-to-wake” method is preferred in disclosure for both airlines and corporations as it captures the full emissions reductions impact of SAF as compared to conventional jet fuel. This is the method we used in calculating emissions reductions from our pilot SAF transactions (see Appendix for our calculations by each method). LCA calculations, as well as the systems that track and verify other SAF characteristics through the chain of custody, can improve and become more accurate over time with more comprehensive detail about the life cycle of any given batch of fuel, from feedstock origin to processing to transport to use.

In our pilots, each airline used a different methodology to calculate emissions benefits. For the future, standardized emissions calculations would be beneficial in providing a uniform and trustworthy approach to Scope 3 buyers. Deloitte recommends that future SAFc guidance provides a standard method for all airlines and their customers to calculate emissions reductions associated with a batch of SAF on a “well-to-wake” basis.

Figure 2. SAF feedstocks¹³

Feedstock category	Feedstock type	SAF equivalent (billion gal/yr)	SAF equivalent (% of 2030 jet fuel demand, totals 120%)
Advanced and waste	Agricultural residues	23	17%
	Cellulosic cover crops	39	29%
	Forestry residues	22	16%
	Municipal solid waste	38	28%
	Oil trees on degraded land	12	9%
	Oil-cover crops	9	7%
	Waste and residue lipids	7	5%
	Wood-processing waste	12	9%
Captured non-industrial carbon	CO ₂ from DAC	Unlimited	Unlimited

Ensuring feedstock sustainability

Beyond life cycle emissions reductions, it is critical that SAF feedstocks are responsibly produced and obtained upstream of the fuel production itself to be able to claim that the fuel is truly sustainable. Trade-offs are likely in biomaterials production and use between fuels and other productive uses. A host of potentially negative indirect and societal effects are present with many common feedstocks for SAF, including edible crops like sugar cane, corn, or palm. Deforestation and food insecurity are of particular concern when considering land use trade-offs in producing crop-based, as opposed to waste-based, feedstocks. ICAO CORSIA lays out a comprehensive set of criteria for evaluating the sustainability characteristics of SAF, and particularly its feedstocks, but there is value in holding SAF to even higher standards that include safeguards for

indirect or induced land use change (ILUC), for example. SABA is formulating a sustainability framework that is likely to include, among other features, more rigorous sustainability safeguards for SAF feedstocks.

One of the most important opportunities to mitigate these risks is to improve the transparency of SAF supply chains, and particularly feedstock inputs. To ensure that feedstocks are sustainable, it's critical to understand how and where they are produced.

ICAO CORSIA provides default emissions factors that cover the full supply chain, including transportation logistics. Any given batch of sustainable aviation fuel can be made up of multiple feedstock types from a variety of locations. This reality makes assurance and disclosure challenging at best. Feedstock and fuel producers may share emissions factors that are



specific to the fuel production process, which may differ from the CORSIA default values. While these producer-given values are likely more precise than the default values, it is critical that these values are independently audited to ensure that they are accurate.

Both ICAO CORSIA-approved sustainability certification scheme holders for SAF (RSB and ISCC) also have feedstock certification schemes, which can provide detailed assurance that feedstocks are sustainably produced. However, the feedstock certification process can be time-consuming and cost-prohibitive, and to date, it has not been a priority for many fuel producers trying to keep

production costs down for airlines. Many fuel producers have opted for certification at the SAF production stage, but there has been no SAF batch certified to date through the full supply chain. In our pilots, SAF was certified at the production stage in two of three transactions, and at the feedstock level in one of three. This patchwork of certification, coupled with limited insights about feedstock origin in chain-of-custody documentation, means we do not have detailed sustainability assurance about the full supply chain of the SAF. We were not surprised by this, as we know the field is nascent, and we will work in future transactions to encourage increased certification and disclosure.



II. Transaction considerations

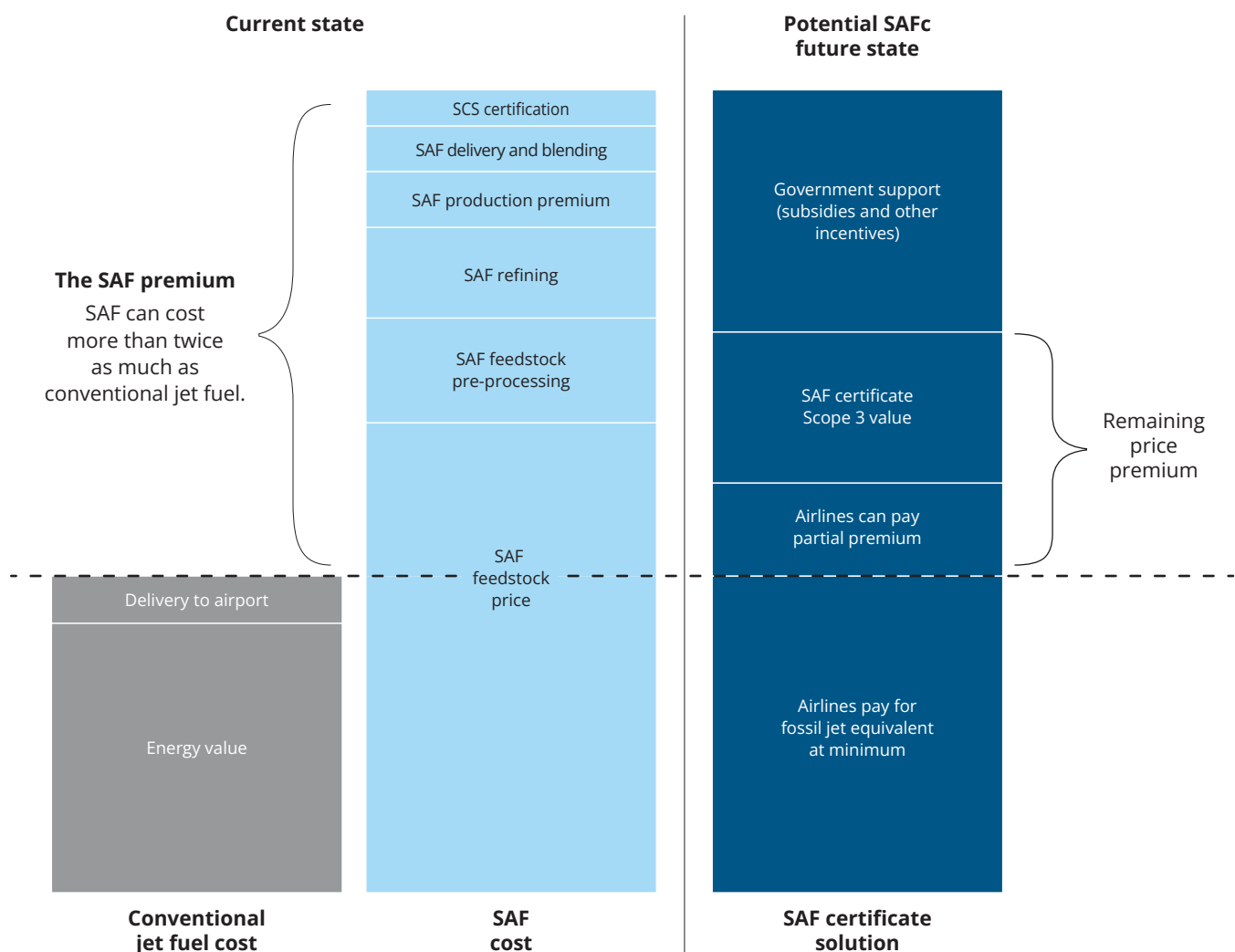
In addition to sustainability assurance, it's critical to structure SAF transactions and their outcomes in a standardized way to enable this market to scale efficiently and credibly. Standardization and transparency of claims (and the data that underlie them) is important as it allows buyers to compare fuel attributes on an equivalent basis and sends a clear signal for the highest integrity SAF through SAFc purchases. Feedstock disclosure in particular allows differentiated demand and favorable pricing for the most sustainable options. This will let corporations interested in purchasing Scope 3 emissions reductions credibly claim and disclose the sustainability attributes associated with their SAF certificate purchases.

Price

As expected in a nascent market, SAF prices range widely. In our pilot transactions, we paid a price premium over conventional jet fuel in order to claim the Scope 3 emissions benefits. The SAF price premium, as paid by corporate buyers like Deloitte, is the cost of the SAF, including logistics costs and sustainability certification, less the price of conventional jet fuel and any SAF subsidies or other incentives (see figure 3). This price premium is at least twice the price of conventional jet fuel today, but it is likely to decrease over time as producers learn by doing and the industry scales up production.

This premium is typically communicated both per gallon and per metric ton of CO₂e emissions avoided. While prices are stated per gallon during the sales process, the price per metric ton is a more meaningful metric from a sustainability perspective and allows for accurate comparison. We paid an average of \$130 per metric ton of CO₂e avoided (with a “well-to-wake” methodology), and this cost ranged by more than \$90 per metric ton avoided. This significant range indicates that the nascent SAF market has ample room to mature and equalize across similar types of SAF production.

Figure 3. SAF price premium and the cost of SAFc





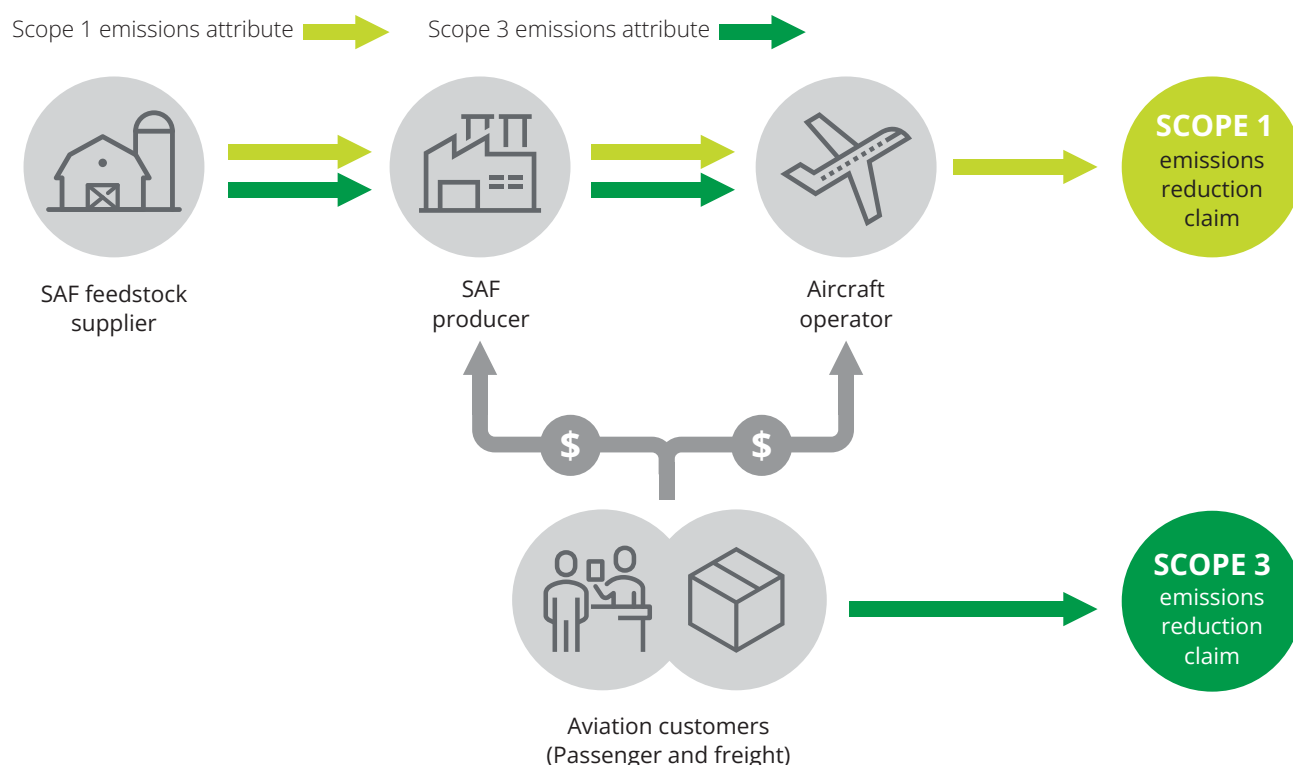
In all three pilot transactions, Deloitte received a predetermined SAF cost from the airlines, without a clear price breakdown relative to conventional jet fuel. Companies purchasing Scope 3 emissions reductions from SAF will benefit from more transparent and competitive pricing. Programs such as SABA, that aim to enable multiple SAF suppliers to sell directly to an air transport end customer, may be an alternative to executing bilateral transactions with airlines. It also may be more efficient for an organization to address all annual air travel emissions at the enterprise level with a single SAFc contract and purchase as opposed to executing bilateral transactions with multiple airlines or SAF suppliers.

Ideally, SAF can be supplied to the lowest-cost location to keep the price premium down. Leveraging existing supply chains will simplify transport logistics and reduce associated transport emissions. But maximizing SAF production from the lowest-cost supply chains (and addressing the remaining price premium for this SAF production through SAFc) will require decoupling SAF usage from the actual flights that corporate travelers take. A book-and-claim system enables the physical fuel volume to be delivered to any airport and for anyone to pay for and own the environmental attributes. Transport logistics-related costs decrease when a SAF certificate purchase is comprised of multiple buyers making up a larger volume than would be possible through individual transactions. Plus, using an existing supply chain will avoid the costs associated with a non-routine delivery to a new location.

Proposals to lower SAF costs

Today, several proposed policies would decrease the SAF premium through tax credits and other incentives, including the Blender's Tax Credit as proposed in the Sustainable Aviation Fuel Act in the United States, and the RefuelEU, which similarly incentivizes SAF purchases. The Low-Carbon Fuel Standard (LCFS) in California and Oregon, as well as several proposed and existing SAF blending mandates in Europe, will likely increase the use of SAF and indirectly affect the price premium.

Figure 4. Flows of SAF and SAFc Scope 1 and Scope 3 claims¹⁴



Ownership claims

In our SAF pilots, Deloitte's procurement was limited specifically to the Scope 3 rights for the environmental attributes of SAF. The airlines maintained ownership of the physical fuel volume, as it is impractical and onerous for an organization outside the aviation industry to get involved in the physical fuel supply chain.

As a future SAFc will represent all of the environmental attributes of an associated batch of SAF, SAFc transactions confer emissions attributes, in addition to other environmental attributes such as the air quality and economic development factors evaluated in an SCS certification like RSB or ISCC's SAF certification schemes. In our SAF pilots, we focused primarily on the emissions attributes and on how we can allocate and report the emissions reduction claims after the SAFc digital certificate system has been established.

For Deloitte and other organizations to substantiate emissions reduction progress associated with use of SAF, we need future SAFc purchases to

enable credible Scope 3 emissions reduction claims and disclosures that specifically count toward business travel emissions accounting. Even when the physical fuel associated with a SAF certificate purchase is not burned by an aircraft that a corporate employee is traveling on, the company would need to be able to report lower-emissions-intensity business travel as a result of its SAFc purchases. This claim is valid because, as a direct result of the intervention, there is more SAF being used on flights, and thus fewer emissions from aviation are being released into the atmosphere.

For this reason, it is important to differentiate the boundaries between Scope 1 and Scope 3 emissions reduction ownership in each contract. Our pilots were directly with airlines, so we needed to clearly articulate which party could claim which benefits as part of the transaction terms.

Detailing the boundaries of emissions scope claims is particularly important because there is a risk of double-counting Scope 3 emissions reductions if an airline publicly reports Scope 1

emissions reductions that were made possible through a corporate voluntary (Scope 3) purchase. In our SAF pilot contracts there was no clear statement on how airlines would manage the communication of their associated emission benefits from our purchase with their other passengers. To avoid the potential scenario where Deloitte or another organization claims full credit for SAF Scope 3 reductions and another customer assumes that their own carbon footprint has been partially addressed by default, an airline must maintain separate carbon emission inventories.

A standardized set of contract terms that clearly articulate which emissions reductions airlines and corporate buyers can each hold and use, and in which circumstances, will make this process more efficient, lower-risk, and less legally intensive for future SAFc transactions. We believe there is a need for SAFc claims to be standardized and universally recognized by the Greenhouse Gas Protocol to use them as credible emissions reduction actions for our disclosures and commitments, including but not limited to, SBTs.

SAF use is recognized by SBTi as a valid mitigation action in its August 2021 Aviation Sector Guidance.¹⁵ However, the GHG Protocol does not yet recognize SAF as a mitigation option to address Scope 3 emissions. Voluntary purchases that enable additional supply of SAF and emissions reductions beyond compliance should provide confidence to the environmental NGOs that SAFc are “additional.” A robust physical tracking mechanism and associated registry to retire certificates will help to bolster the case for the SAFc to be recognized in future updates to the GHG Protocol.

Another key transaction consideration is additionality, or, in this case, whether our SAF pilots directly enabled new SAF production, as opposed to contributing to SAF that would have been purchased without our organization's actions. Deloitte did not include a specific additionality requirement for the pilot transactions, but our purchases did facilitate new SAF delivery, and we see the value in enabling new SAF supply through SAFc transactions.

Finally, we believe that it will be critical that, once the SAFc system is developed, these certificates and their associated claims are visible to the public in a transparent database or registry. The SAFc can be claimed or “retired” on a registry that recognizes the final user of the emissions reduction claim. This

Emerging resources for the SAF market

SABA is working to accelerate the path to net-zero for aviation by stimulating and aggregating new demand for SAF, setting a robust sustainability framework for high-integrity SAF, and establishing an independent registry.

1. Demand aggregation: Determining the potential for multiple buyers to jointly issue a request for proposals and developing standard contract provisions.

2. Sustainability framework development: Setting a robust framework to support high-integrity SAF by: evaluating emissions over the entire life cycle of the fuel, establishing sustainability criteria, ensuring an emission reduction impact, and adopting a transparent accounting approach that prevents double counting.

3. Tracking and registry development: Establishing a book-and-claim and registry system to register, transfer, and retire the entitlements to claim SAF's environmental attribute with integrity.

SABA also will develop education resources and initiate SAF policy discussions in the future.

public repository can help serve as an auditable record to underlie corporate sustainability reporting and voluntary and regulated disclosures. This infrastructure also can safeguard the market against the risk of double-counting emissions benefits. Registries are a critical piece of the architecture in analogous environmental attribute certificate systems, like the Renewable Energy Certificate in the United States or the Guarantee of Origin in the European Union, as well as in carbon markets like the EU Emissions Trading Scheme (ETS). An independent SAF certificate issuing body and registry will lend significant credibility to this emerging solution.

What's next?

Piloting how a future SAFc could function and add value is a critical step in our effort to reduce our air travel emissions. We hope that our pilot experience informs and supports other organizations in their decision-making processes. We invite others to pursue their own SAF transactions to demonstrate interest in a long-term, viable SAF market, supported by the SAFc mechanism. We see tremendous opportunity in a robust and universal SAFc system that enables organizations to credibly invest in new SAF supply, and we applaud the work that SABA, WEF CST, the Roundtable on Sustainable Biomaterials, and the Smart Freight Centre, among others, are doing to turn this concept into reality.

Acknowledgments

Thank you to the airlines for embarking on this journey with us. The authors would also like to thank Laura Hutchinson, Adam Klauber, and Kathleen Wight of RMI for their contributions to this report.

Appendix

Table 1. FY2021 Deloitte air travel emissions

TTW emissions (mt CO ₂ e)	3,296
WTT emissions (mt CO ₂ e)	550
WTW emissions (mt CO ₂ e)	3,846
WTW emissions reductions from SAF transactions (mt CO ₂ e)	5,845

TTW = “tank-to-wake”

WTT = “well-to-tank”

WTW = “well-to-wake”

Notes:

- We did not formally report on the emissions reductions from our SAF transactions in FY2021
- FY2021 was a pandemic-affected travel year

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Endnotes

1. "WorldClimate," Deloitte, <https://www2.deloitte.com/global/en/pages/about-deloitte/articles/world-climate.html>
2. "A Year of connection, action and impact," Deloitte, <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/global-impact-report-performance-metrics.pdf>
3. Unless otherwise indicated, "we", "our", and "Deloitte" refer to Deloitte LLP in the United States, not the entire global organization.
4. Electric and hydrogen-fueled planes, although promising, are unlikely to be viable options for larger commercial flights within the next decade.
5. "Clean Skies for Tomorrow: Sustainable Aviation Fuels as a Pathway to Net-Zero Aviation," World Economic Forum, April 21, 2021, <https://www.weforum.org/reports/a356c865-311e-45ca-845d-efe5f762a820>
6. "Powering Sustainable Aviation Through Consumer Demand: The Clean Skies for Tomorrow Sustainable Aviation Fuel Certificate (SAFc) Framework," World Economic Fund, June 30, 2021, <https://www.weforum.org/reports/powering-sustainable-aviation-through-consumer-demand-the-clean-skies-for-tomorrow-sustainable-aviation-fuel-certificate-safc-framework>
7. Unless otherwise indicated, in this report we use the term "pilot" to describe Deloitte's process in purchasing SAF environmental attributes, and SAFc when referring to the future state of the SAF certificate system that we hope our experience detailed here will inform.
8. "Sustainable Aviation Buyers Alliance," Rocky Mountain Institute, <https://rmi.org/saba/>
9. "Teaming up with top airlines for sustainable fuel," Deloitte, <https://www2.deloitte.com/us/en/pages/about-deloitte/articles/sustainable-aviation-fuel-agreements.html>
10. The full 12 ICAO CORSIA sustainability themes are: legality; planning, monitoring, and continuous improvement; greenhouse gas emissions; human and labor rights; rural and social development; local food security; conservation; soil; water; air quality; use of technology, inputs, and management; and land rights.
11. "Science-based target setting for the aviation sector," Science Based Targets initiative, August 2021, https://sciencebasedtargets.org/resources/files/SBTi_AviationGuidanceAug2021.pdf
12. "Decarbonizing the Air Transportation Sector: New greenhouse gas accounting and inseting guidelines for sustainable aviation fuel," MIT Center for Transportation & Logistics, July 20, 2021, <https://sustainable.mit.edu/sustainablefuel/>
13. "Clean Skies for Tomorrow: Sustainable Aviation Fuels as a Pathway to Net-Zero Aviation," World Economic Forum, April 21, 2021, <https://www.weforum.org/reports/a356c865-311e-45ca-845d-efe5f762a820>
14. "Powering Sustainable Aviation Through Consumer Demand: The Clean Skies for Tomorrow Sustainable Aviation Certificate (SAFc) Framework," World Economic Forum, June 2021, http://www3.weforum.org/docs/WEF_CST_SAFc_Demand_Signal_Report_2021.pdf
15. "Aviation Sector," Science Based Targets, <https://sciencebasedtargets.org/sectors/aviation>

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