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ENVIRONMENT



SAF Logistics

Produced and presented with support of
Air BP, Kenya Airways, SFO, TFS



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ACT  **SAF**



1. Opening

Neil Dickson

Chief, Environmental Standards

ICAO Environment





Provide participants with knowledge on SAF Logistics and how all parts of the SAF supply chain work together.



Mary Stiers
Air bp
Sustainability strategic
business development
manager



Hakan Sercan Fidan
Turkish Fuels Services
Project/Business
Development and Supply
Planning Specialist



Erin Cooke
San Francisco International
Airport
Sustainability and
Environmental Policy Director



Grace Vihenda
Kenya Airways
Head of Innovation and
Sustainability



- 1. ICAO update on ACT-SAF programme and CAAF/3**
2. Air BP
3. Turkish Fuels Services
4. San Francisco International Airport
5. Kenya Airways
6. Questions & Answers
7. Closing



ACT-SAF platform provides the most recent information:

- List of Partners constantly updated
- ACT-SAF series material available online

ACT-SAF Series

Coordination with ACT-SAF partners identified that many States need conceptual training on SAF.

To address that, ICAO is developing the ACT-SAF Series of training sessions, to be held on a monthly basis. This will allow delivering comprehensive training to ACT-SAF Partners on an array of important SAF-related topics, ranging from sustainability, to policy, economics/financing certification and logistics.

The ACT-SAF Series will empower the ACT-SAF Partners with training material designed with the support of Supporting States and Organizations from the air transport, fuels and finance sectors, as well as academics and actors with niche expertise such as SAF reporting under CORSIA.

Want to participate on the ACT-SAF Series? Join ACT-SAF now (click here to access the ACT-SAF Terms and Conditions). Participation is open to all States and Organizations interested in further action on SAF.

ACT-SAF Series	Date	Topics	Contributor(s)	Abstract	Video and Presentation
#1	25 November 2022	An introduction to SAF	ICAO	<ul style="list-style-type: none"> Introduction to ACT-SAF Basics of SAF 	 Download Presentation
#2	25 January 2023	SAF sustainability and reporting under CORSIA	ISCC, RSB, Verifavia	<ul style="list-style-type: none"> process for sustainability certification of SAF Reporting and verification of SAF Claims under CORSIA 	 Download Presentation
#3	23 February 2023	SAF technology and certification	Airbus, US FAA, Safran	<ul style="list-style-type: none"> specifications for aviation turbine fuels process for approval for new production pathways 	 Download Presentation
#4	23 March 2023	SAF policies	Brazil, European Commission, ...	<ul style="list-style-type: none"> Practical experiences from States 	

89 States



ICAO ACT-SAF Platform

Here you will find more information on our ACT-SAF Participants*



51 Organizations



Latest news on ACT-SAF

Date	Latest news	Link
11/17/2023	SAF investor and Carbon direct joins ACT-SAF	
9/26/2023	Boeing joins ACT-SAF	Link
6/1/2023	4 States join ACT-SAF (Ghana, Greece, Mali, Zambia)	
5/24/2023	European Commission announces 4 million euros to support SAF development under ACT-SAF	Link
5/23/2023	Inter-American Development Bank joins ACT-SAF	

<https://www.icao.int/environmental-protection/Pages/act-saf.aspx>



Key request - conceptual training on SAF

ACT-SAF Series (preliminary list of sessions)



#1 Introduction to SAF

#2 SAF sustainability and reporting under CORSIA

#3 SAF production technology and certification

#4 SAF policies

#5 SAF conversion processes

#6 SAF accounting and Book and Claim systems

#7 SAF logistics  Today's Session

#8 Hydrogen for aviation

#9 SAF Feasibility Assessment

- Survey to be sent this end of the year to receive your feedback on the ACT-SAF Programme

- Future sessions on specific aspects
- Subject to review – **feedback welcome**



- Adoption of a new **ICAO Global Framework for Sustainable Aviation Fuels (SAF), Lower Carbon Aviation Fuels (LCAF) and other Aviation Cleaner Energies.**
- **Collective global aspirational Vision to reduce CO2 emissions in international aviation by 5 per cent by 2030, compared to zero cleaner energy use.**
- Support the clean energy transition of the aviation sector needed to achieve the current goal of Net-Zero carbon emissions by 2050



<p>1. Policy and Planning</p> <ul style="list-style-type: none"> • Collective global aspirational Vision to reduce CO2 emissions in international aviation by 5 per cent by 2030 through the use of SAF, LCAF and other cleaner energies (compared to zero cleaner energy use). • States are encouraged to implement policies in support of the Vision; harmonization of policies amongst States is encouraged. • The role of State Action Plans is recognized. • The Vision is a collaborative effort with action required from different stakeholders. • Monitoring and reviewing the global framework, including through annual ICAO stocktaking and the convening of CAAF/4 no later than 2028. 	<p>2. Regulatory Framework</p> <ul style="list-style-type: none"> • Use the CORSIA sustainability framework as the accepted basis for the eligibility of SAF, LCAF and other aviation cleaner energies. • Increase the number of ICAO approved SCS, in all regions. • Accelerate the certification of additional fuel production pathways. • Accounting methodologies such as the CORSIA MRV, provides confidence in the use of such fuels; States agreed on a set of parameters and further work from CAEP to undertake a study of fuel accounting systems for international aviation currently used in the open market.
<p>3. Implementation support</p> <ul style="list-style-type: none"> • All States should have access to the means to participate across all stages of the development and deployment of SAF, LCAF and other aviation cleaner energies; work together in a spirit of solidarity. • Need for robust and substantial capacity-building and implementation support programme; ICAO capacity-building and implementation support to be delivered under the one-ICAO approach. • Access to technology for States to contribute to, and benefit from, cleaner energy development and deployment. • ICAO should regularly monitor the progress and effectiveness of the capacity-building and implementation support efforts. 	<p>4. Financing cleaner energy</p> <ul style="list-style-type: none"> • The primary objective for ICAO and its Member States with respect to financing should be to support countries in particular developing countries and States with particular needs, to improve access to low-cost financing and funding, and further de-risking of projects. • The need for significant cooperation and collaboration between stakeholders to mitigate investment risk. • Key role of ICAO, States and industry in advocating for greater investment in SAF, LCAF and other cleaner energy projects. • Support to Finvest Hub and request to urgently operationalize the initiative.

Announcements during CAAF/3

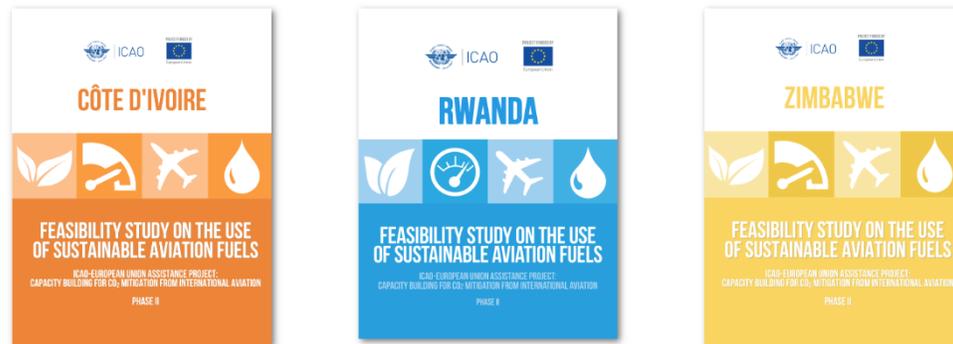
Projects coming to fruition thanks to the voluntary contributions:

- **EU** : Feasibility studies in 10 African States
- **France** : Business Implementation Report in Ethiopia +1 State TBC.
- **Netherlands** : Feasibility Studies in 3 States (Jordan and Chile + 1 TBC)
- **Airbus** : 3 Feasibility Studies in South America
- **UK** – TBD
- **Cote d'Ivoire** - TBD



Announcements during CAAF/3

- **Three Feasibility studies** (Ivory Coast, Rwanda, Zimbabwe) have been completed under ACT-SAF, funded by the EU, using the ACT-SAF “**Template for Feasibility Studies on Sustainable Aviation Fuels**” and contain:



- Information on the **specific situation of the State**
- Identification of **priority pathways for SAF** production
- Information on **implementation support and financing needs** for the implementation of the priority pathways identified; and
- **Recommendation of an Action Plan** aligned with the State’s governmental policies related to the SAF development, with a focus on the priority pathways identified.



Feasibility Studies available on the [ACT-SAF website](#)



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Presentation of Air bp - SAF Logistics





Sustainable aviation fuel (SAF)

We leverage our value chain encompassing feedstocks, global production, logistics and airport infrastructure

Delivering today >

We are one of the leading marketers of SAF and to date **we have supplied to over 40 locations***.



*November 2023

We supply SAF from two bp refineries: [Lingen ISCC EU](#), [Castellón ISCC+](#).



We are in strategic partnerships with others to scale demand.



Our global capability in trading and shipping gives us **the ability to move feedstocks and finished product effectively.**



Building for the future >

We are in strategic partnerships to increase feedstock availability.



We develop and co-own technology for SAF development.



We play a role in securing approvals for SAF pathways.



We plan to do more to help meet bp's aim to produce around 100,000 barrels of biofuels per day by 2030, supported by planned investments in **several new projects.**



SAF logistics

SAF is a drop in fuel

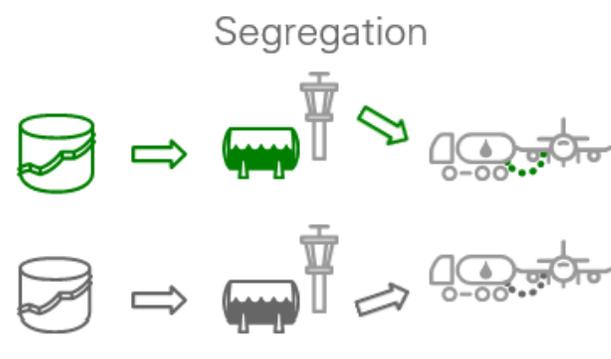
Fuel made from 100% renewable feedstocks can be blended with conventional fossil jet fuel (up to 50:50). This blend can be used as a 'drop in' jet fuel.

- "SAF" can either mean (i) the fuel derived from 100% renewable feedstocks or (ii) the blend of renewable and fossil fuel (with up to 50% renewable) currently used in aviation
- SAF derived from 100% renewable feedstocks can give a reduction in lifecycle carbon emissions of up to 80% compared to the conventional fossil fuel that it replaces



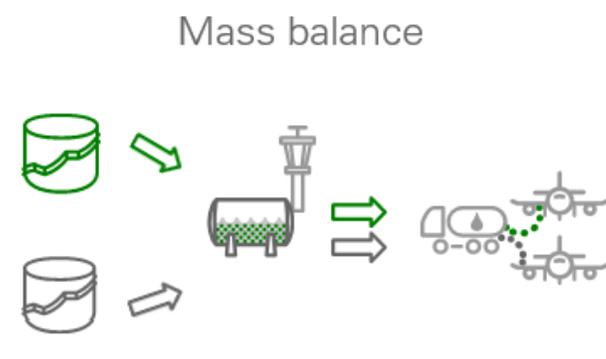
Examples of chains of custody for SAF

Three distinct supply methodologies are available:



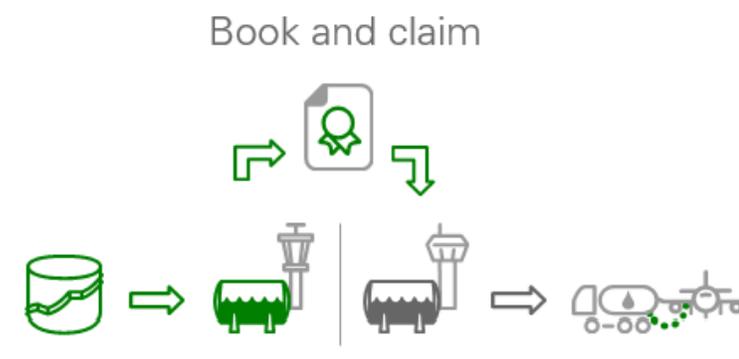
Physical segregation to traditional jet fuel all the way to wing tip.

- ⊕ Physical delivery to customer
- ⊖ Higher cost for separate infrastructure and transport
- ⊖ Operationally inflexible and non-scalable



Co-mingled in airport storage or pre-airport pipelines.

- ⊕ Using existing infrastructure
- ⊕ Enable a Lower carbon footprint than a segregated supply chain
- ⊖ Higher carbon footprint than **book and claim**



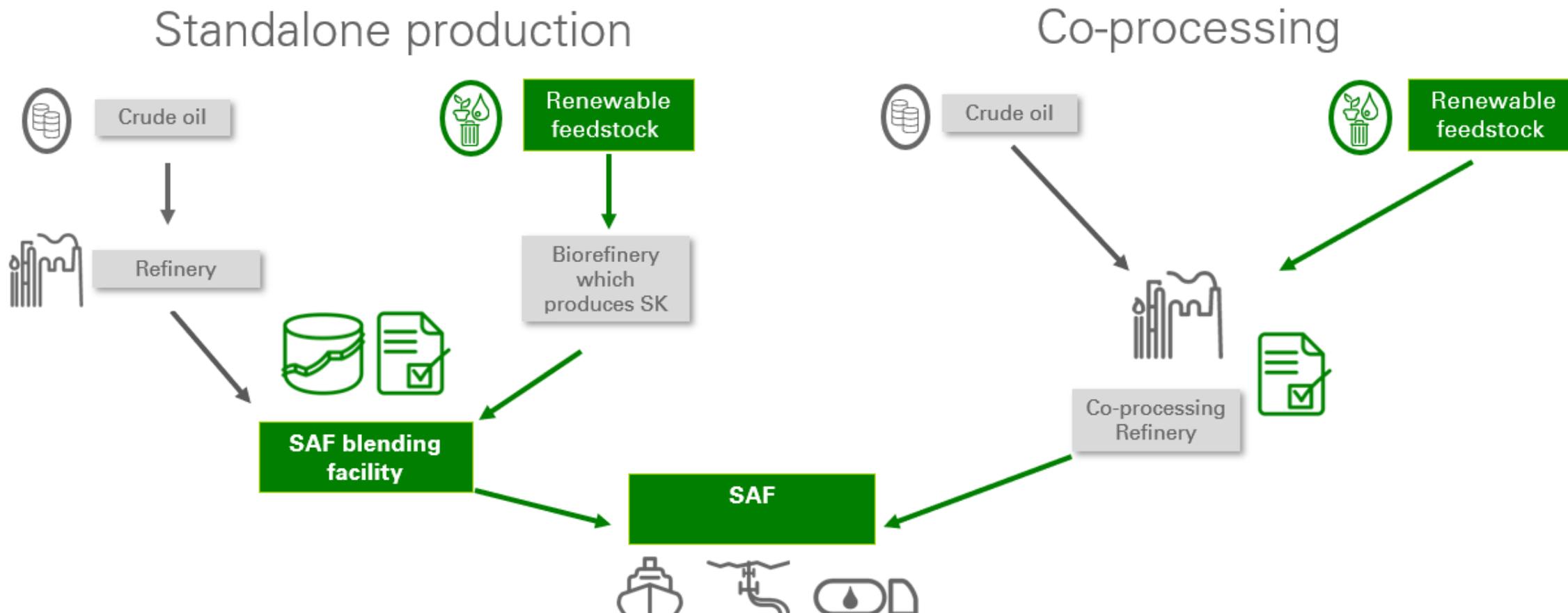
Most efficient supply chain used. Product does not get delivered to customer location.

- ⊕ Using existing infrastructure
- ⊕ Enables reduction in logistics cost and carbon emissions
- ⊖ Not eligible for most local incentive schemes or regulatory measures

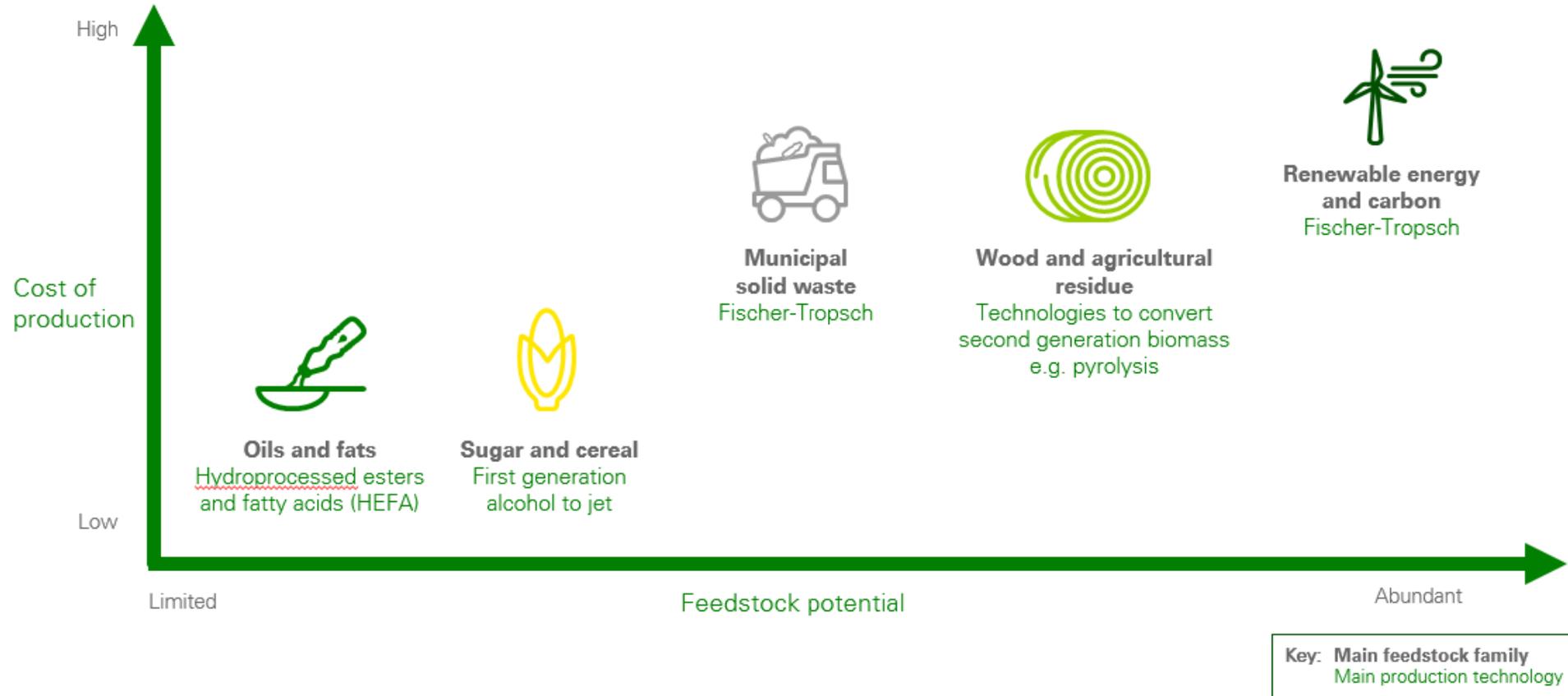
Key:

	Storage depot		Airport
	SAF		Traditional jet fuel

Logistics considerations for SAF

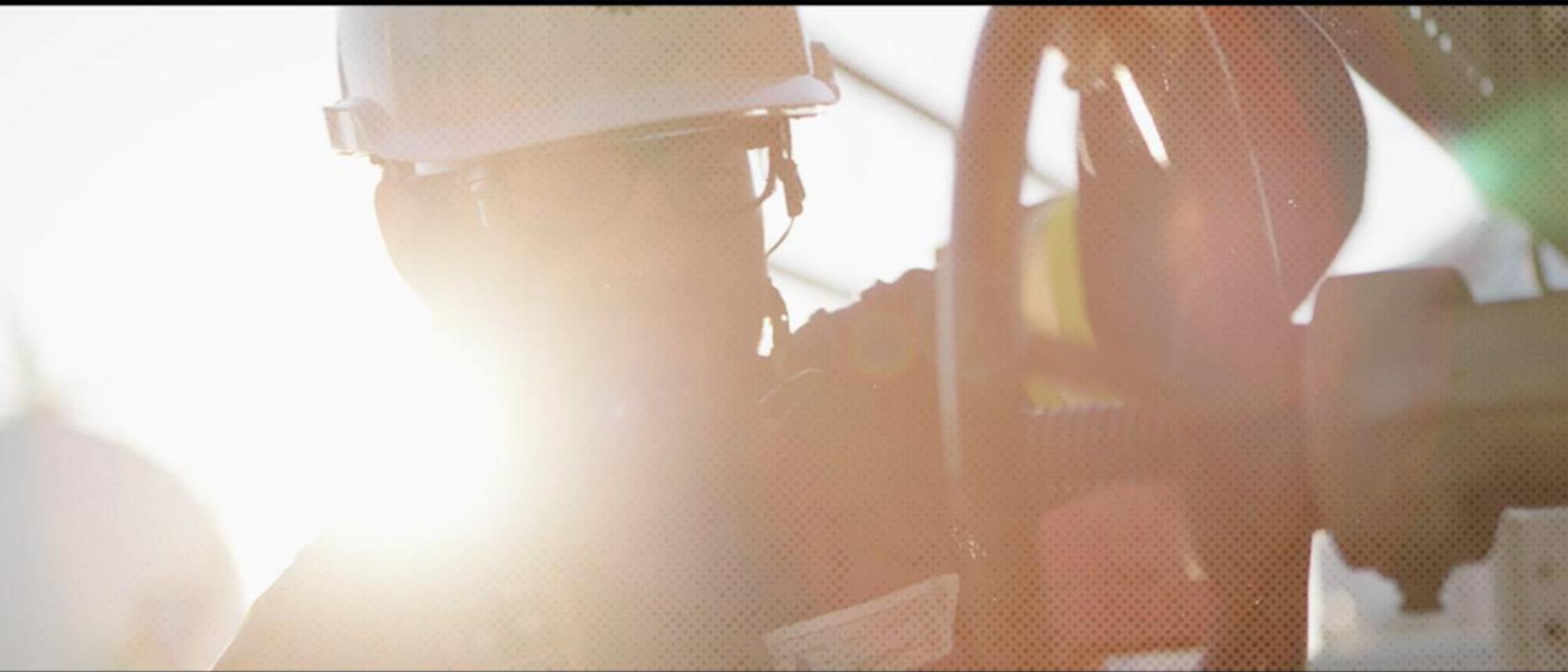


Feedstock logistics



UK terminal example of SK blending





In summary

- Drop in fuel achieved (key to simplifying logistics)
- Co-processing gives opportunity to simplify logistics (no separate blending; existing logistics access)
- Mandates should consider mass balancing centres rather than every airport
- Book and claim system also help broaden SAF's reach
- Feedstock types impact logistics and plant location





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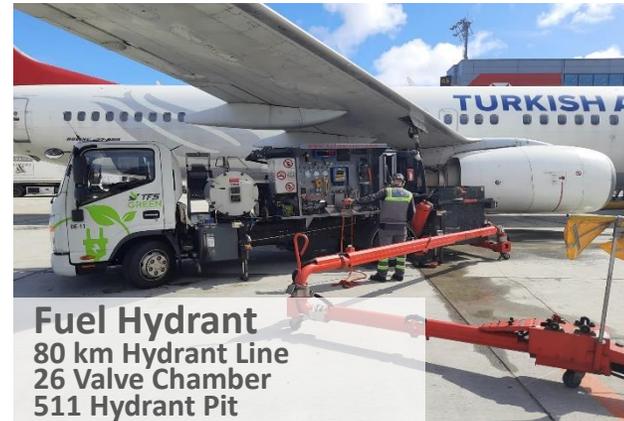


Presentation of TURKISH FUEL SERVICES work on SAF Logistics

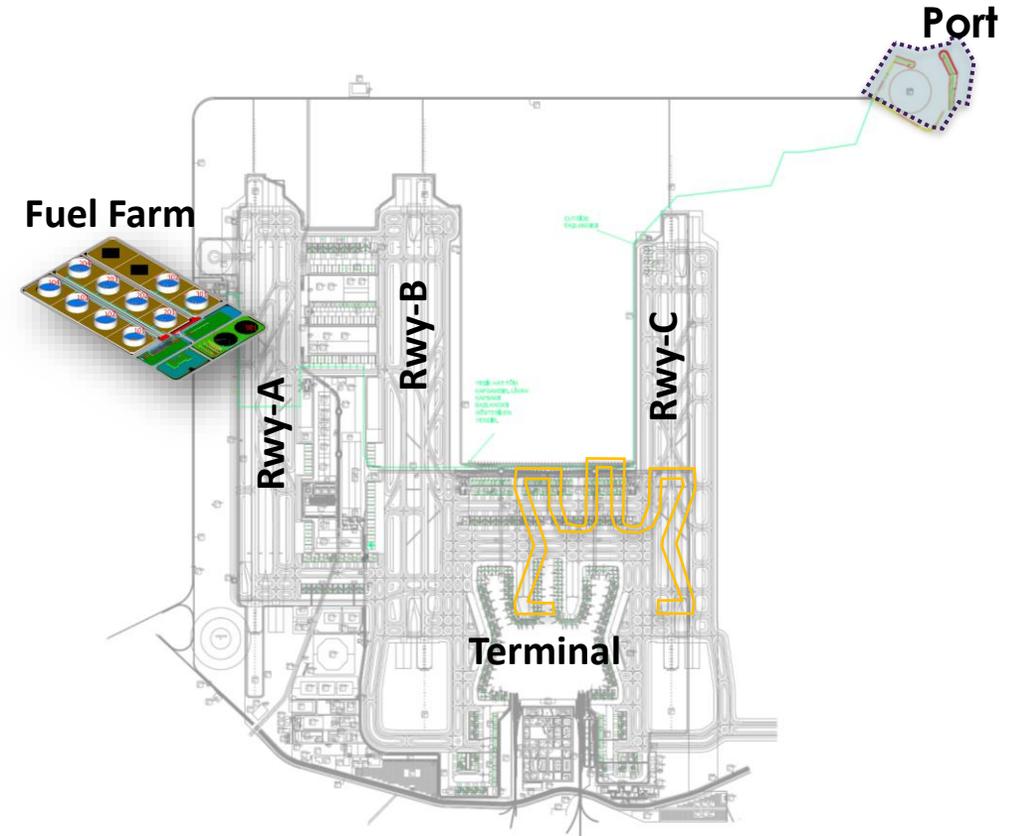




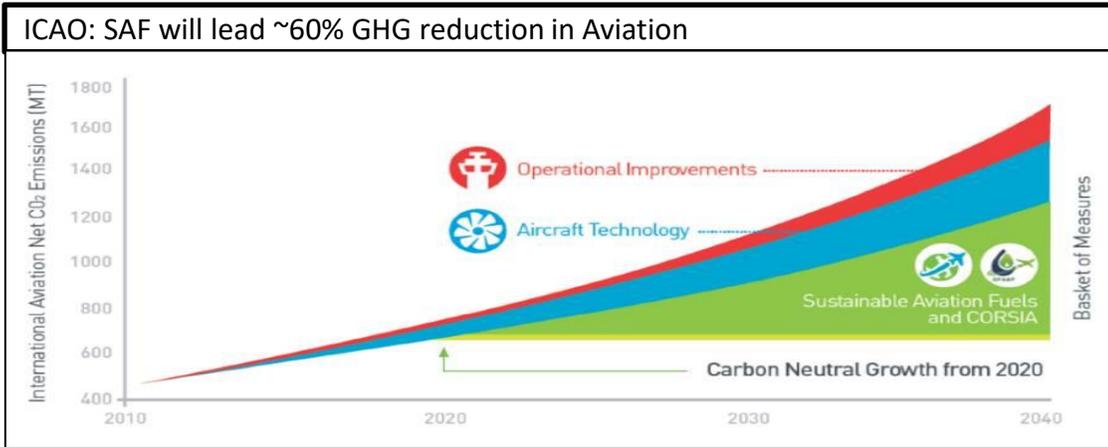
- The leading jet fuel company of Turkey, with over 50% market share.
- 3.5 million tonnes of jet fuel supply and sales in 2023. Will increase to 4 million tonnes next year.
- Official jet fuel provider of Istanbul Airport.
- Main supplier of Turkish Airlines.



- Vehicle Fleet**
- 10 x 30 m³ Refueller
 - 10 x Diesel Dispenser (low)
 - 50 x Electric (zero emission) Dispenser (low)
 - 3 x Pit Cleaner



- Aviation accounts for around 2-3 pc of global carbon emissions; electrification not a solution in the medium term
- SAF forecasted 60% of the carbon reduction in the aviation, SAF will not compensated by carbon credits
- SAF production forecasted in EU, with 50 plants and 5 MTY in 2030



■ SAF usage
 ■ Aircraft tech.
 ■ Operational improvements

- EU initiated «ReFuelAviation EU» programme:
- The proposal includes the obligation to use SAF in the following years:
 - 2% in 2025
 - 6% in 2030
 - 20% in 2035
 - 32% in 2040
 - 70% in 2050
- Designed to be conducted to:
 - Airlines departing from Europe
 - Jet Fuel Suppliers
 - Airports in Europe

AB Forecast	2030	2050
SAF capacity	5 MTY	25.5 MTY
New Plant #	50	250
Investment required	€ 7.5B	€ 40B
EU SAF Market	€ 10B/year	€ 45B/year
Flight price increase	~ 8%	~ %20
Fossil jet fuel usage	5% decrease	65% decrease
EU Energy security	-	AB origin 92%

Until today;

- 106 airports distributing SAF
- 34 policies adopted or under development
- 51 billion liters of SAF under offtake agreements
- 11 approved conversion process (+5 under evaluation)
- 285 announced facilities, 76 megatonnes/year total capacity

- Obligation will come into force with the SAF directive of DGCA.
- Some potential investors have started their work for the SAF production facility.
- Demand for SAF by airlines is increasing day by day.
- IGA wants to offer airlines the opportunity to use SAF at İstanbul Airport

Pre-Feasibility study on SAF production facility

- ❖ Feedstock Suppliers
- ❖ Technology Providers
- ❖ Regulatory
- ❖ SAF Market

SAF Supply

- ❖ First Supply in Turkey
- ❖ Supplying SAF in every week to some flight

SAF in glance by TFS

Follow-Up

- ❖ Demo-scale new technologies of SAF studies

Regulation Structure

- ❖ Multilateral talks with public institutions for Turkey



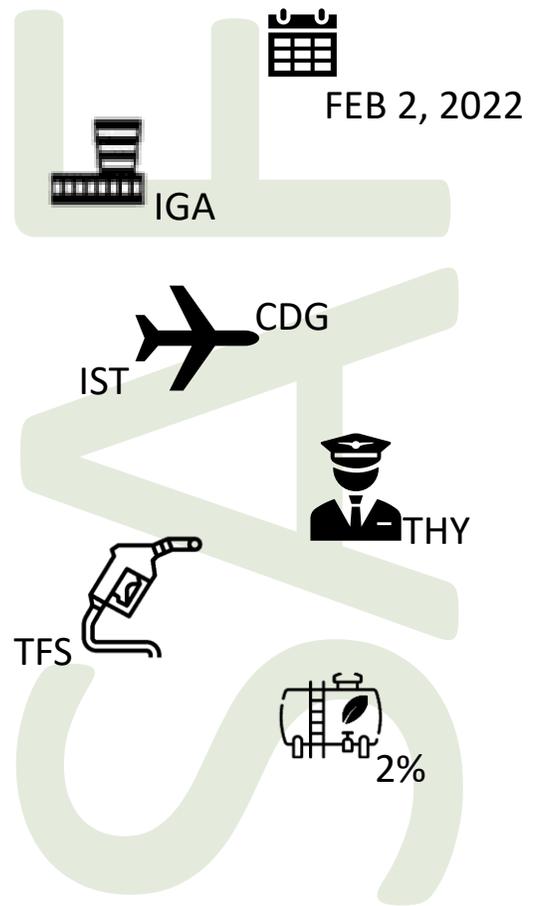


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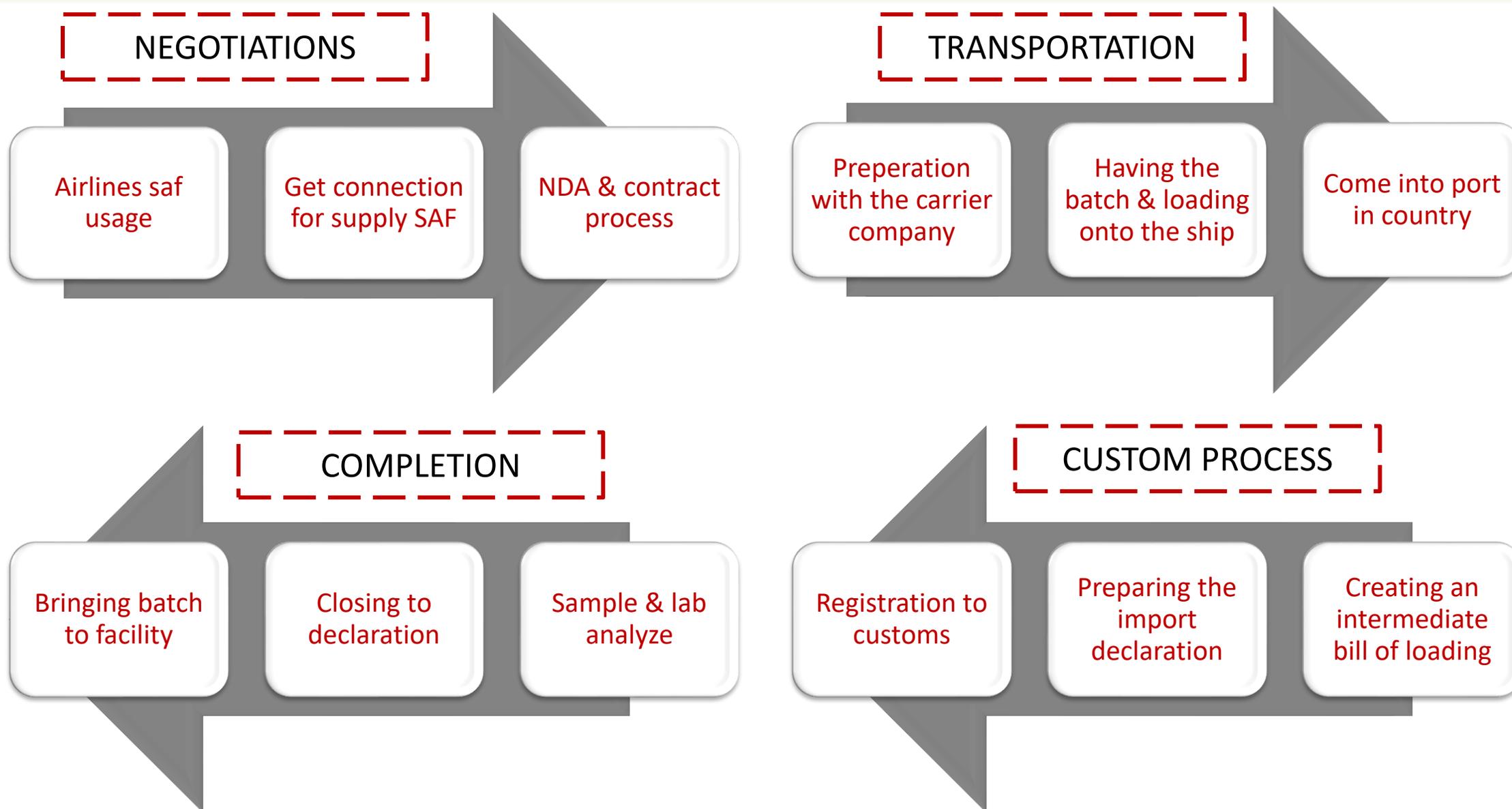
FIRST SAF SUPPLY

ACT>>SAF



FEB 2, 2022





- Inquire about flight plans for SAF usage from airlines, on a monthly basis
- Mixture calculation to supply SAF at the desired rate for each flight
- Two tankers, one with SAF and one with Jet A-1, are allocated for the operation
- The required amount is transferred from the SAF-loaded tanker to the other tanker and preparations are made for supply
- Samples are taken at the moment the mixture is made and just before it is supplied to the plane, and it is checked that it meets the necessary specifications



- 99% of our refuelling operations with electrical dispensers
- We reduce CO2 emissions by 2500 tonnes in 2022
- Now in the process of registering with VCS in order to certify our carbon gains and generate credits.

50

ELECTRIC
DISPENSERS

20

CHARGING
STATIONS



2 DAYS USAGE
WITH 1 CHARGE



1 HOUR CHARGING TIME
(UP TO 80%)



150 KM
1 BATTERY
CHARGING CYCLE

LOW
PROFILE
DESIGN

737 NEW GENERATION
REFUELING WITH DECK
HOSES





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Presentation of San Francisco International Airport - SAF Logistics



Sustainable Aviation Fuel (SAF) Airport Infrastructure Playbook

Erin Cooke
Sustainability & Resilience
November 30, 2023

SFO



SFO by the Numbers

Voted Top US Airport in the Wall Street Journal 2022 Annual Ranking

CY 2019

- 58 Million Annual Passengers
- 48 airlines - 470,000 aircraft operations
- 500,000 metric tons cargo

Direct Economic Impact

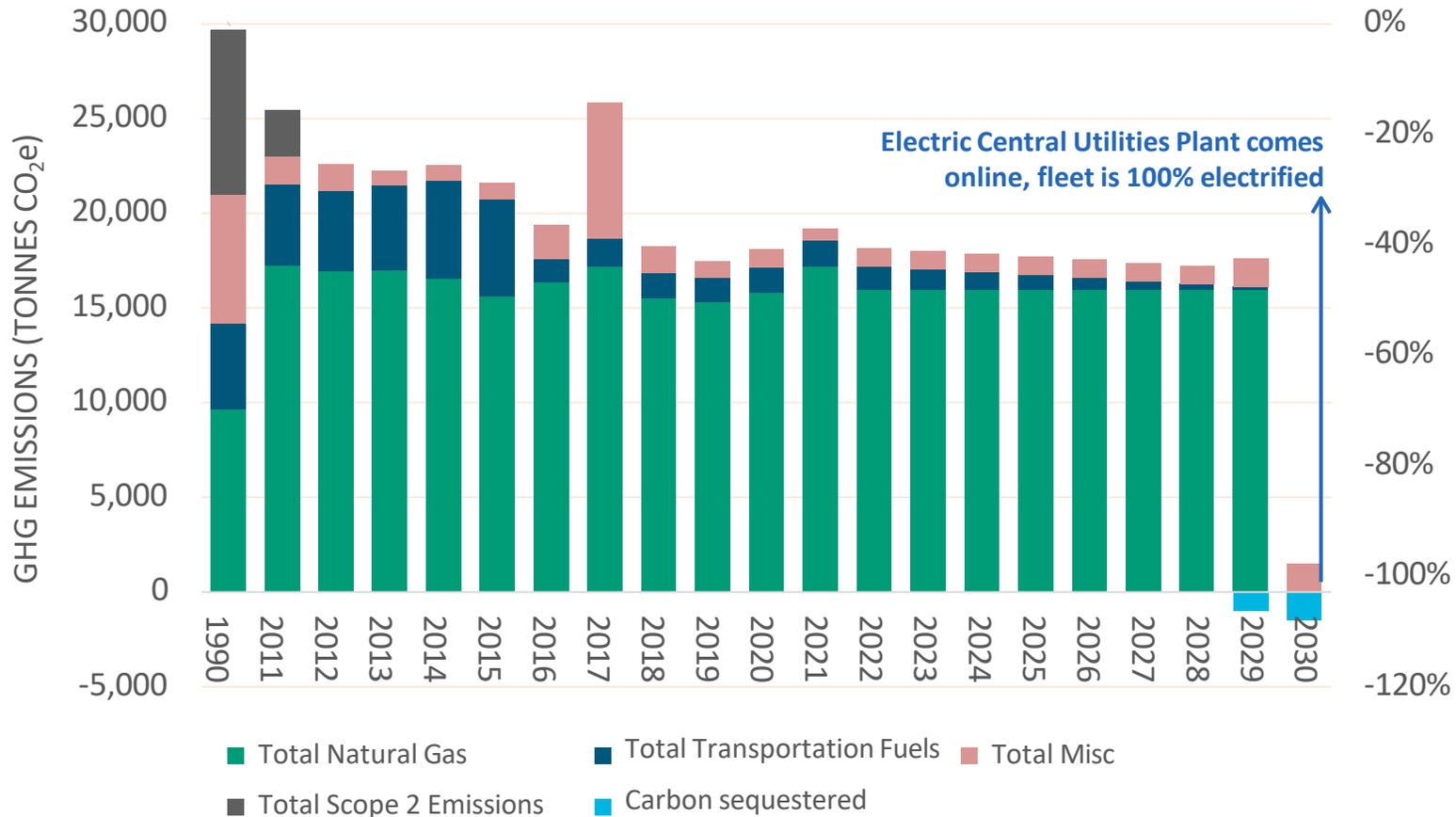
- \$11 Billion in business activity
- \$62.5 Billion benefits to the region
- 46,000 jobs (188,000 Bay Area)

Land Use + Buildings

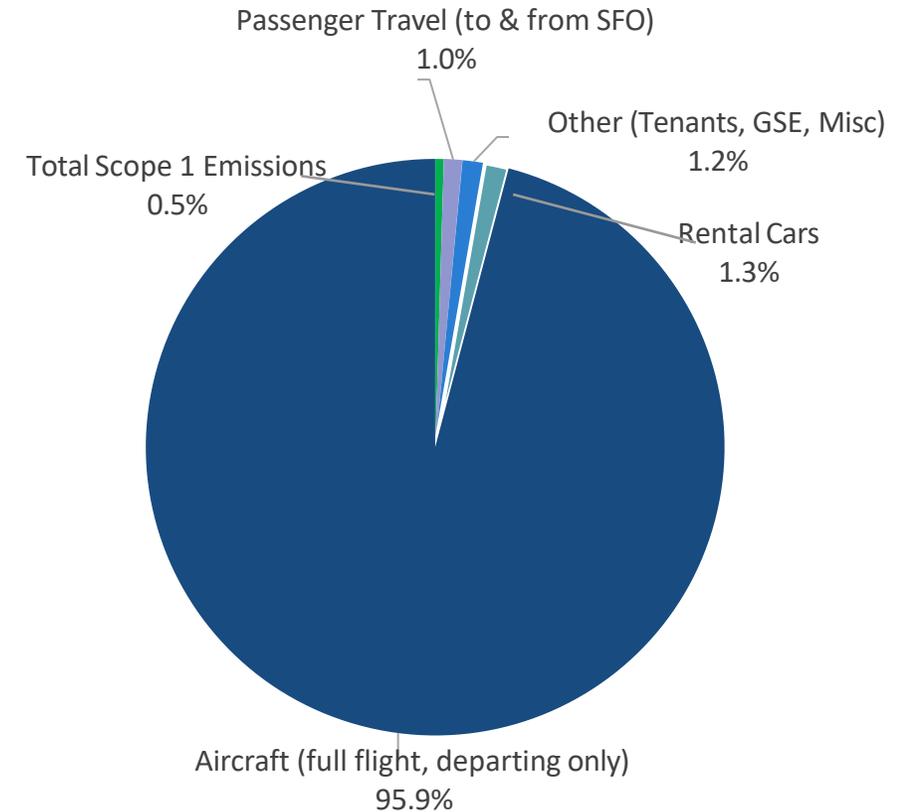
- 5,200 acres total area (3.54 sq. miles)
- 103 Buildings w/37 use types
- 21,000,000 sq.ft.
- 28yr/avrg age; \$53M/yr Utility Spend

Path to Net Zero: Airport vs. Airline

SFO's Path to Net Zero Carbon



SFO 2021 Emissions



Airport SAF Playbook: What to Consider



- What's local? (lower CI)
- What's readily available?
- What's "sustainable"?
- Can we source (FOG)?

- Where's it located?
- Who's offtaking?
- Will it be delivered to us?
- Will it be booked/claimed?

- What exists/access?
- What's its capacity?
- What's constrained?
- What could be reactivated?

- What exists/condition?
- Both upstream/onsite
- How do volumes align, over time horizon?
- Redundance, resilience

SAF SUPPLY CHAIN



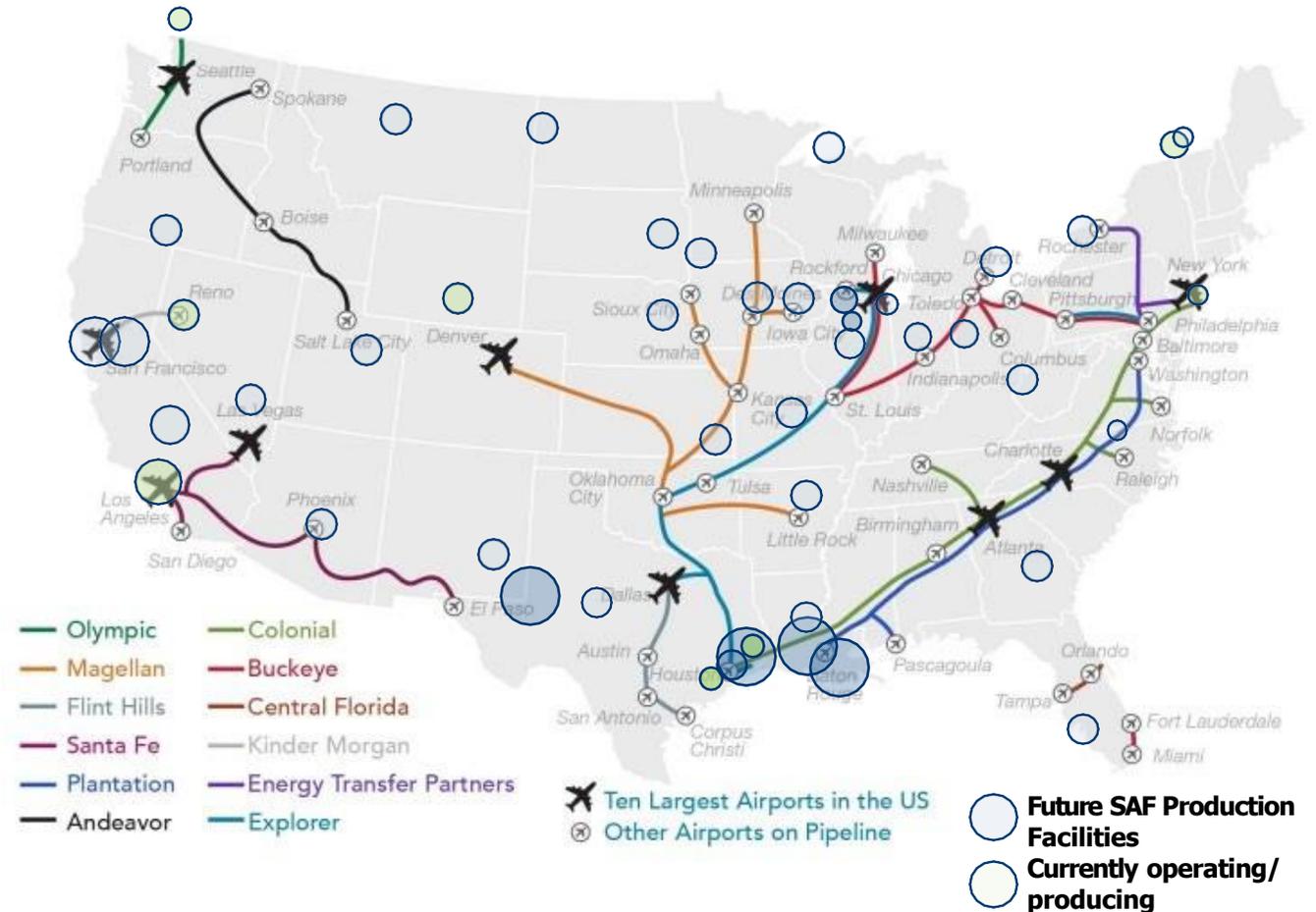
Midstream Infrastructure and Logistics

RESILIENCY AND SUSTAINABILITY

Pipeline access

This map depicts existing jet fuel pipelines that can be used to transport SAF, and their relation to current and near-future SAF production sites as identified in ICAO SAF Facilities Dashboard. New production facilities are expected to come online in the next 1-3 years.

The 10 largest airports in the US are all connected to major pipelines, but many smaller airports do not have pipeline access.



*Source: USDOE Sustainable Aviation Fuel, Review of Technical Pathways
Note: Smaller pipelines and airports supported indirectly by pipeline transport are not included on map

[ICAO SAF Facilities Dashboard](#), accessed September 2023
[Sustainable Aviation Fuel \(SAF\) \(icao.int\)](#)

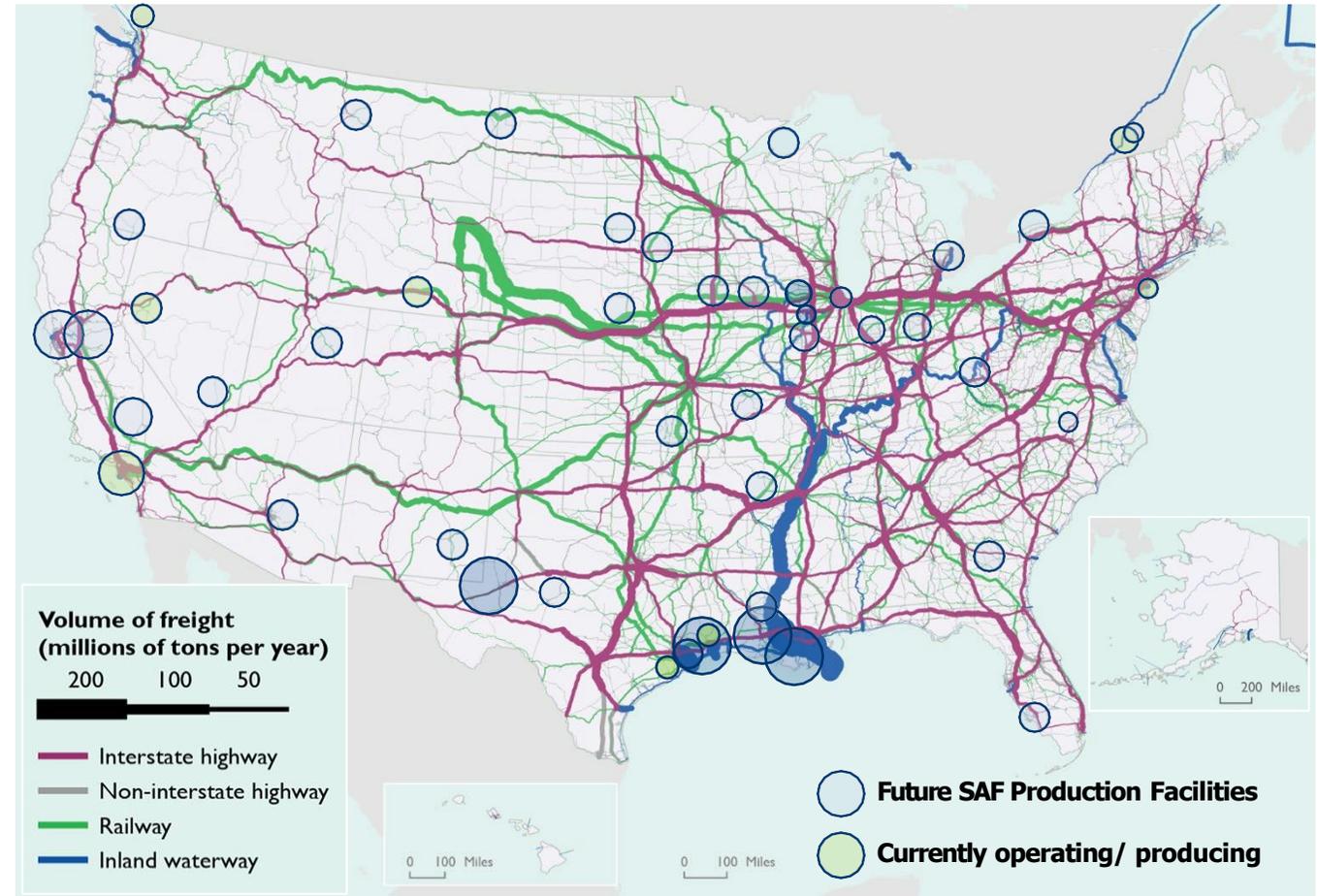


Rail and ground transport

Smaller airports are likely to receive SAF via rail or truck. This map depicts the volume of freight on rail, highway and waterways in the US as of 2018.

Most areas of current and future SAF production are connected to, or adjacent to major roadways or railways, opening up access to SAF to smaller airports.

It can be difficult to carve out room in pipeline delivery schedules for SAF at present. As production volumes increase, transport modes may increase or shift. Adding variety to available modes of SAF transport adds stability to the supply chain.



*Source: USDOE Sustainable Aviation Fuel, Review of Technical Pathways

[Sustainable Aviation Fuel \(SAF\) \(icao.int\)](https://www.icao.int/), [Freight Flows by Highway, Railway, and Waterway: 2018 | Bureau of Transportation Statistics \(bts.gov\)](https://www.bts.gov/)



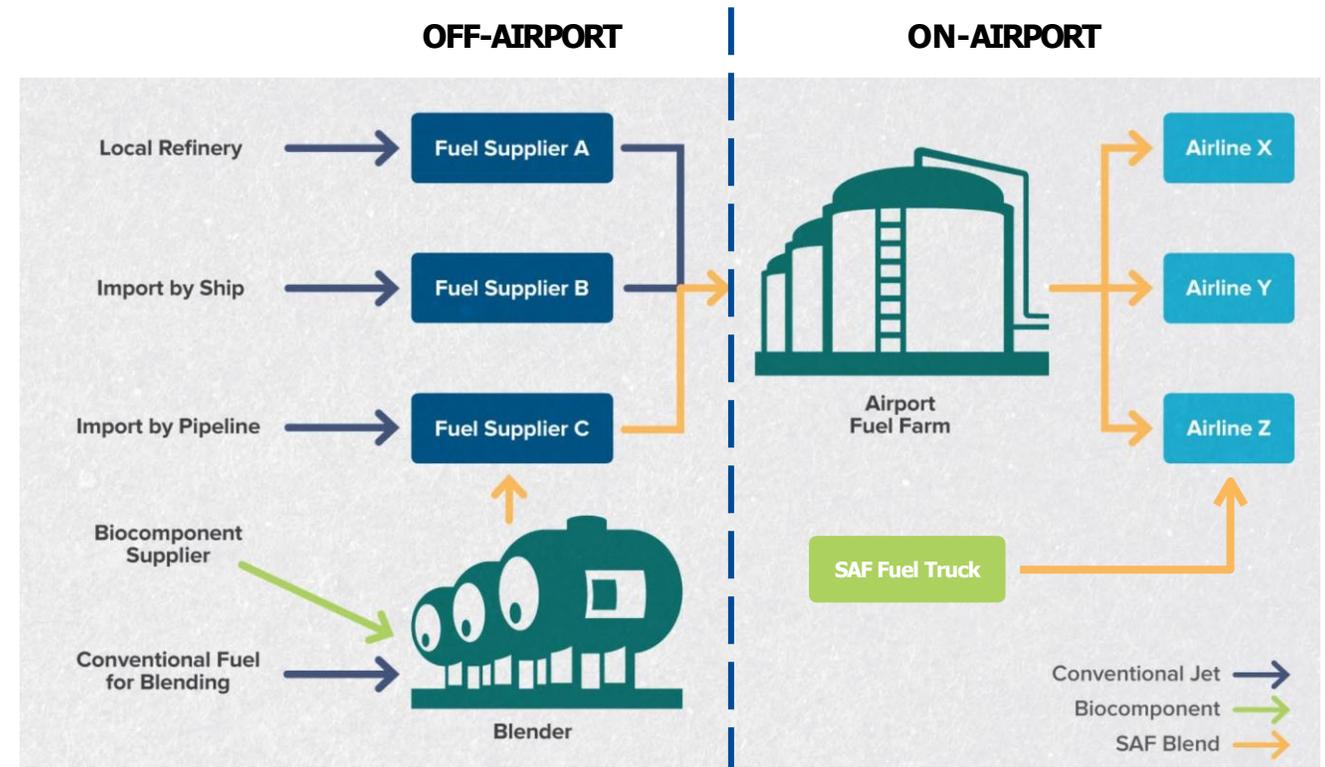
SAF is a blended fuel

RESILIENCY AND SUSTAINABILITY

SAF is typically blended with conventional jet fuel before being delivered to an airport fuel farm. Lesser fuel volumes and 100% SAF flights bypass this system by using dedicated fuel trucks to supply specific aircraft.

SAF produced by the currently lower-cost “coprocessing” route (putting bio-feedstocks and conventional jet fuel into a refinery together) emerges already blended; this is currently limited to 5% SAF and may grow up to 30%. In other blending routes SAF is stored in separate tank from Jet A and blended into a third tank. Both processes will require fuel testing and certification to ensure ASTM standards.

Current ASTM approval limits SAF to 50% of jet fuel, but standard may change in future with advance technology. Boeing and Airbus have committed to deliver aircraft ready to fly on 100% SAF by 2030.



[ICAO EnvironmentalReport2016_1up.indd](#)



At the airport

In coming years, most airports will receive blended SAF via pipeline, rail, barge, or fuel truck. SAF can be stored in general fuel storage tanks with minimal infrastructure modifications required.

Segregation of SAF from conventional jet fuel is technically not needed, nor is additional blending or recertification at the airport. Airports with hydrant or bowser systems should not need to change their processes to accommodate sustainable fuels. Once fuel enters a fuel farm it is unlikely to be delivered to specific flights or airlines. For this reason, some increased instances of fuel truck delivery may occur when a specific delivery of SAF is required.

SAF blended up to 50% is suitable for the majority of aircraft regardless of age. This is considered high-aromatic drop-in SAF (“aromatics” are portions of jet fuel that help jet engine seals to function at high temperatures).

With blended sustainable aviation fuel, certified to ASTM 1655 standards, no fuel segregation is needed, and airports can treat SAF like any other fuel.

At the airport

Newer aircraft are able to accommodate low-aromatic SAF and can be modified to accommodate up to 100% SAF. In coming decades airports may receive SAF blends over 70% and still need to support older aircraft, and in the shorter term specialized flights may want to fuel their craft with 100% SAF. Segregated fuel trucks should be sufficient to handle the demand for these limited cases, where it will be important to track ASTM certificate and blend rate.



Source: Department of Energy

Playbook Applied: SFO



SFO SAF Key Milestones



SFO SAF Playbook: What was Considered



Feedstocks

- What's local? (lower CI)
- What's readily available?
- What's "sustainable"?
- Can we source (FOG)?

Production

- Where's it located?
- Who's offtaking?
- Will it be delivered to us?
- Will it be booked/claimed?

Transport/ Logistics

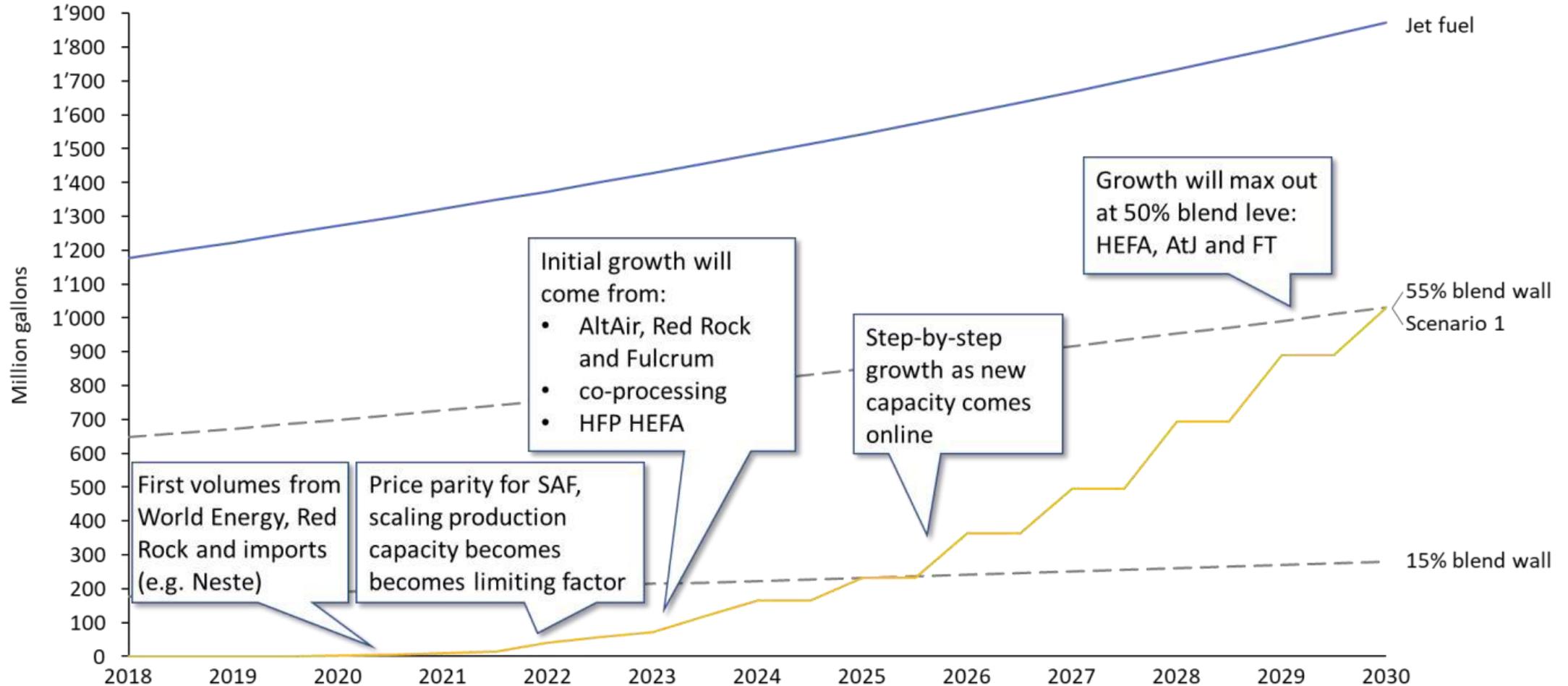
- What exists/access?
- What's its capacity?
- What's constrained?
- What could be reactivated?

Infrastructure

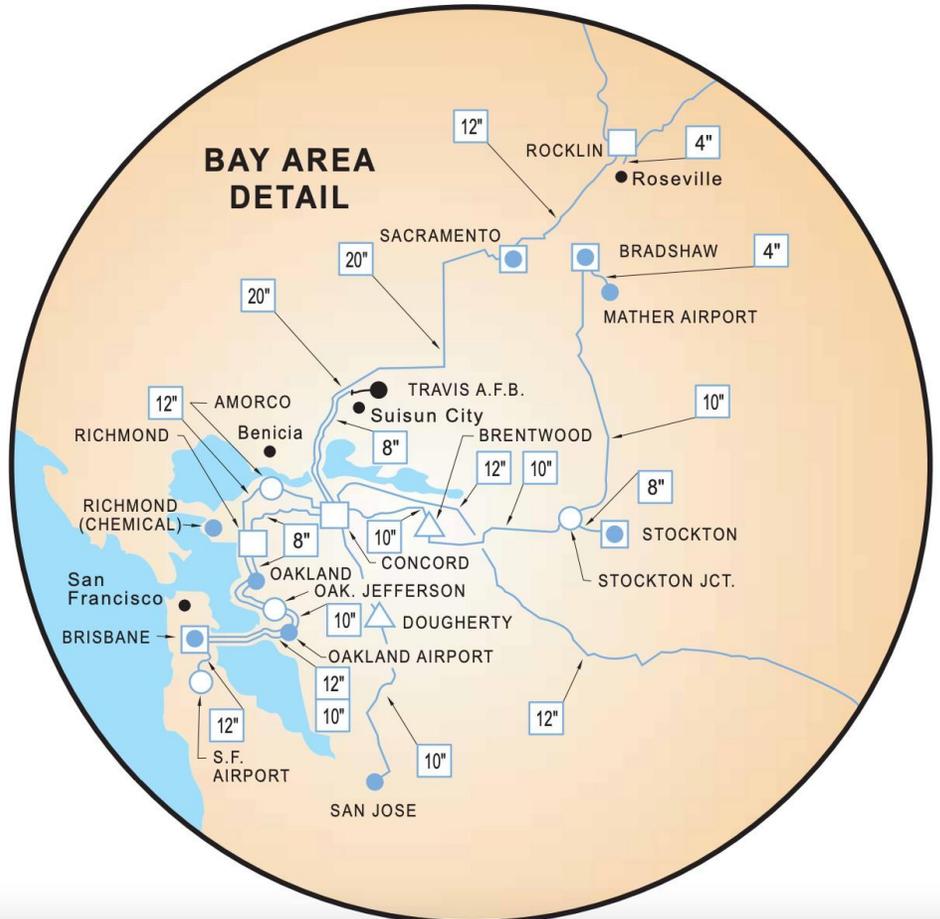
- What exists/condition?
Both upstream/onsite
- How do volumes align,
over time horizon?
- Redundance, resilience

SFO SAF Playbook: Demand Forecast

SFO Goal: 5% SAF by 2025 – 60MGY ~48MMTCO₂e



SFO SAF Playbook: Supply + Demand Forecast



SFO Goal: 5% SAF by 2025 – 60MGY ~48MMTCO₂e

	Short Term 3-5 Years	Mid Term 5-10 Years	Long Term 10+ Years
Conventional Jet Volumes Per Year	1.2–1.4 billion gallons	1.4–1.8 billion gallons	1.8+ billion gallons
SAF Volumes Per Year	0–30 million gallons	30–300 million gallons	300+ million gallons
SAF Production Source	Existing and Planned Facilities (US, Global)	Demand/Price Induced (West Coast, Global)	Mainstream Production (California)
SAF Neat Delivery Modes to Blending	Truck, Ship	Ship, Truck	Truck, Pipeline
Pipeline Delivery to SFO Fuels	KM	New Cross Bay	

Learn more by visiting our [SFO SAF Webpage](#)

SFO SAF Playbook: Logistics

Figure 12: Short-term Site Criteria Comparison

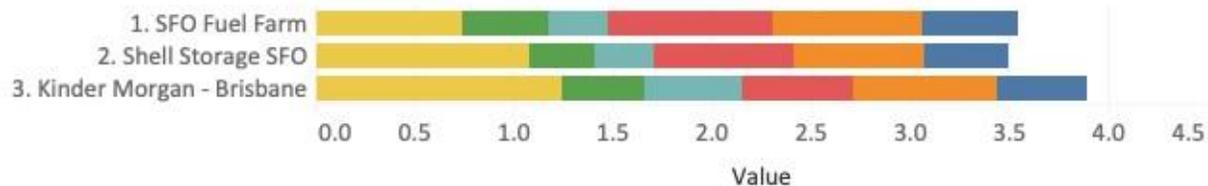
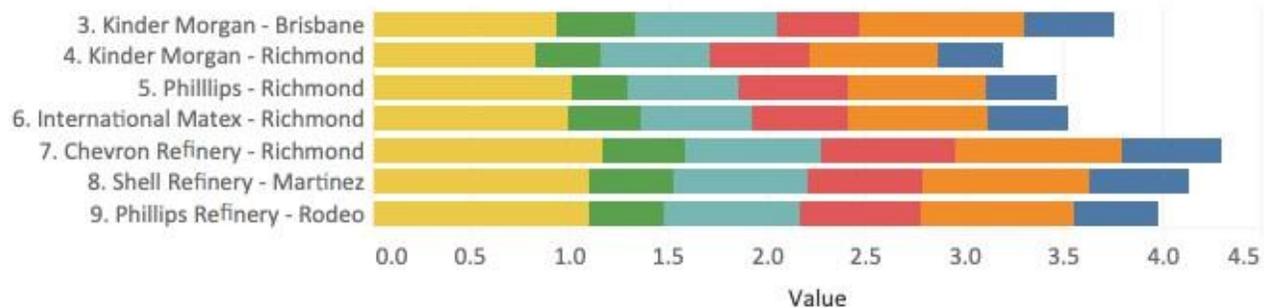


Figure 13: Mid-term Site Criteria Comparison



- Category**
- Community Acceptance
 - Contingency and Operational Risk
 - Environmental
 - Logistical Access
 - Permitting and Planning
 - Site Development

Figure 8: New Build SAF Producers



Source: SkyNRG



Source: WSP

Learn more by visiting our [SFO SAF Webpage](#)
 CAAFI [State of SAF Presentation](#)

SFO SAF Playbook: Demand Forecast

Shell Storage Facility

The proposed facility improvements at the Shell Storage Facility would serve as a small volume facility to support up to 30 million gallons annually of neat SAF that would be delivered to the facility as neat SAF certified to ASTM 7566. This facility currently serves as a backup to the SFO Fuel Farm and receives its product via the KM SFPP pipeline whenever that facility is unable to receive fuel. This facility currently does not have any truck offload positions, as the existing truck offload canopy is empty. This entire facility's tankage is rented by SFO Fuels for conventional jet fuel storage, with a total useable capacity of 186,300 bbls. Since such a large volume of conventional jet fuel is already stored onsite, no improvements to conventional jet fuel storage are proposed.



Site 2: Shell Storage Facility (SFO)
 Legend: SFPP (red line), Highway/Major Road (yellow line), Site Property (red area), Industrial Zoning (blue area), Freight Rail (green line), Dock (blue square), Other Property Evaluated (pink area), Other Zoning (yellow area)



Required infrastructure:

- » (2) 300 gpm pump and filter separator offloading skids to be installed in the existing canopy
- » (2) API 650 nominal 364,000 gallon vertical aboveground neat SAF receipt storage tanks – field erected
- » (2) API 650 nominal 1,050,000 gallon vertical aboveground blending storage tanks – field erected
- » (2) 1,200 gpm redundant fuel transfer/recirculation pumps
- » Approximately 1,000 feet of 6-inch offload piping
- » Approximately 500 feet of 8-inch tank transfer piping
- » Integration into existing tank gauging and controls system

The overall cost of the above infrastructure improvements is estimated to be \$40.3 million or \$55 per gallon of neat SAF storage capacity. Based on the scoring criteria, the site receives an overall average score, with high scores for acceptance. With only truck delivery options for neat fuel, opportunities are limited for neat SAF supply; however, further investments in storage capacity at the site adjacent to the airport provide a backup for potential future supply disruptions and reduce near term exposure to cross-bay pipeline capacity constraints.

Total Score		2. Shell Storage SFO	
Multi-Modal Delivery Point Access - Total Score	10.0%	Primarily Truck	●
Environmental - Total Score	20.0%	Moderate Risk	●
Permitting and Planning - Total Score	10.0%	Oil products terminal	●
Site Development - Total Score	30.0%	Moderate risk	●
Community Acceptance - Total Score	10.0%	Low risk for challenges	●
Contingency and Other - Total Score	20.0%	Some operational risk	●
Total Weighted Average Score	100.0%	Average overall score	●

SITE PLAN
SCALE AS SHOWN

SCALE
0 10

SAN FRANCISCO INTERNATIONAL AIRPORT
SUSTAINABLE AVIATION FUEL FEASIBILITY STUDY

PRELIMINARY
NOT FOR
CONSTRUCTION



SHELL STORAGE F/
(SFO) - SMALL VOLU
EX111

Thank you.





Presentation of Kenya Airways - SAF Logistics



The Sustainable Flight Challenge

KQ Experience on SAF

Presented by:
Grace Vihenda, Head of Innovation and Sustainability,
Kenya Airways.

   @KenyaAirways  KQ mobile

 **Kenya Airways** 
The Pride of Africa



Our Strategic Goal on SAF

To explore the production, development and marketing of SAF in Kenya and the African Continent.

What now?

Based on our focus on **environmental consciousness**, and in preparation for compliance with the **EU laws on SAF uptake**, we pioneered the **first long-haul commercial flight out of Africa powered by SAF.**



What we found out: barriers



Fragmented
supply chain and
logistics

Zero regulatory
framework on
SAF

Zero
Infrastructure for
SAF

Mis-aligned and
un-identified
Stakeholders

Theoretical
Assumptions on
the use and cost
of SAFs in Africa

What we did

- We pioneered the first SAF-powered long-haul commercial flight out of Africa.
- Identified the gaps in the SAF supply chain: difficult and expensive to navigate, carbon footprint
- Identified, worked with and facilitated technical support for local suppliers to blend the SAF locally.
- Made a true realization of the actual very high cost of powering a SAF flight from the African continent.
- Held meaningful collaborations with various stakeholders and partners
- Created a sense of urgency on the SAF conversation
- Catalyzed the right environment to set up a technical working group to develop a regulatory framework



Our recommendations

- A harmonized approach, preferably regional, to the development of SAF policies and regulatory frameworks as opposed to silo initiatives/projects.
- Set up SAF production facilities in Africa to mitigate the cost of SAF and fragmented supply chain.
- Government to issue incentives to attract investment, uptake and implementation of SAF initiatives; including tax reliefs.
- Capacity building: Educate and drive more awareness on SAF.
- Advocate for SAF infrastructure (blending, pipeline, airport).
- Explore local solutions through innovation as well as Research & Development of production pathways.



Our role as an airline

- Demonstrating commitment
- Developing and implementing our SAF roadmap
- Strategic partnerships and collaborations – fuel suppliers, aircraft manufacturers, research institutions, funding organizations, and other stakeholders.
- Advocacy and industry engagement
- Customer education and communication



Who we worked with





Thank You!



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Questions and Answers





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Closing Remarks



Key request - conceptual training on SAF

ACT-SAF Series (preliminary list of sessions)



#1 Introduction to SAF



#2 SAF sustainability and reporting under CORSIA



#3 SAF production technology and certification



#4 SAF policies



#5 SAF conversion processes



#6 SAF accounting and Book and Claim systems

#7 SAF logistics  **Today's Session**

#8 Hydrogen for aviation

#9 SAF Feasibility Assessment

- Survey to be sent this end of the year to receive your feedback on the ACT-SAF Programme

- Future sessions on specific aspects
- Subject to review – **feedback welcome**



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THANK YOU