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Media Briefing
SAF and Net Zero updates
Dr. Marie Owens Thomsen
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Slide 2

Net zero in every industry requires replacing the energy source – not the activity that relies on it. With the world relying on fossil fuels for over 80% of its energy consumption, we understand that this is a whole-economy issue, and that no single industry can achieve this on their own.

All governments must maximize renewable energy, and renewable fuel production, for all.

This, in turn, will maximize also air transportation's contribution to the global economy, and its ability to accelerate growth in most other industries, to achieve better economic and environmental outcomes for all.

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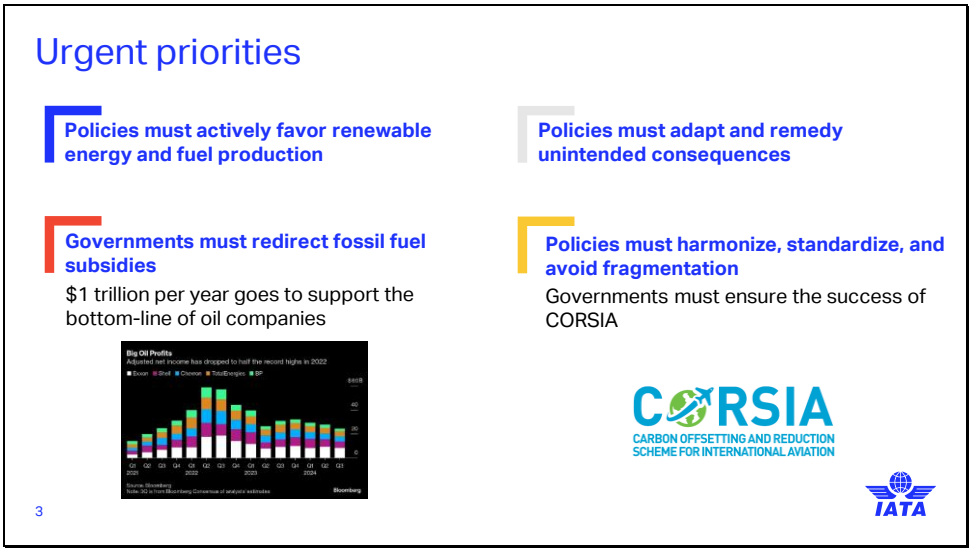

The top priority is to increase renewable energy and fuel production. In doing so, governments must be mindful of unintended consequences that often afflict new and immature markets, and take action to eliminate oligopolistic pricing behavior.

Governments must eliminate legacy policies as well, that were warranted maybe 100 years ago, but that today stand in the way of the energy transition. Looking at oil company profits, it is wholly unjustified to support their bottom lines with tax credits and handouts, and inexplicable why such support is not provided to renewable energy companies. If redirected, the USD 1 trillion annually of favors to big oil could fund the energy transition in air transportation in less than 5 years.

Air transportation is a uniquely global network and each uncoordinated action taken by an individual government will cause damage to it. Global standards have made air transportation what it is today: the safest, most secure, and the by far the fastest mode of transportation in the world, providing unparallelled connectivity to more people and businesses than ever before, at an increasingly accessible price.

Slide 4

CADO SAF Registry

CADO – The Civil Aviation Decarbonization Organization

- Ensure global credibility and oversight

The SAF Registry

- Standardized and transparent tracking
- Enable a global, transparent, and liquid SAF market
- Allow unchangeable emissions claims
- Give access to corporate Scope 3 emissions claims
- Enable co-financing

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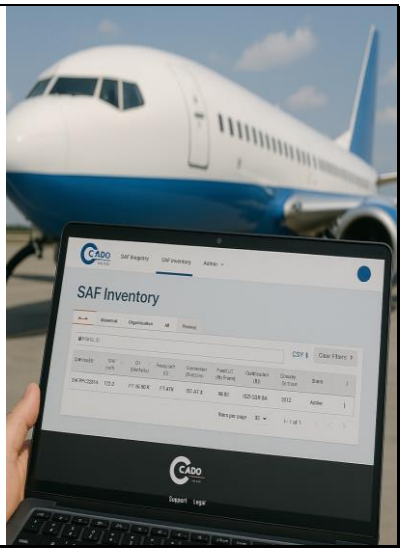

At IATA, we are providing essential market infrastructure to help create a global SAF market that is necessarily global, transparent, liquid, and accessible to all.

We have launched a new international organization, the Civil Aviation Decarbonization Organization, CADO, to ensure immutable tracking of the environmental benefits of SAF purchases and their orderly claiming against regulatory obligations. IATA hopes to be joined by ICAO as a governing member of CADO in due course.

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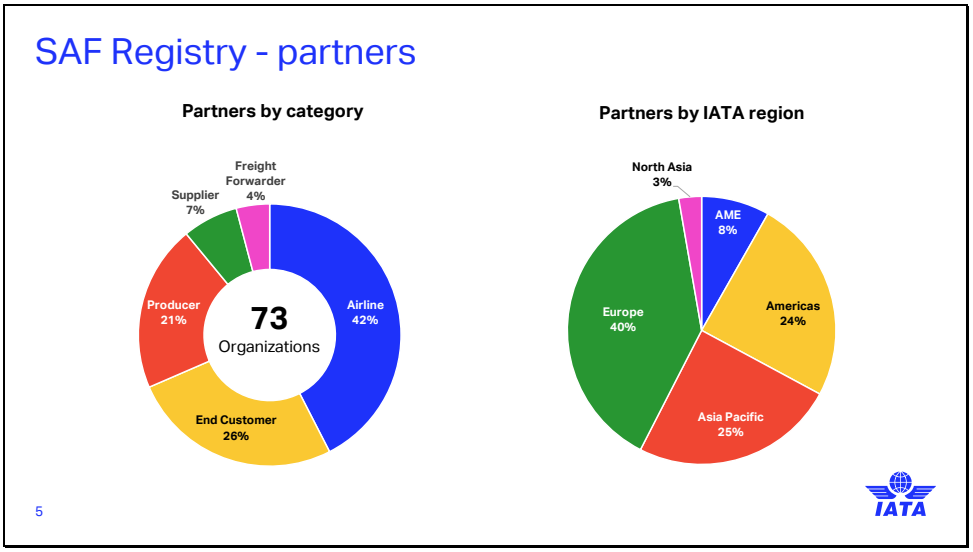

The SAF Registry, managed by CADO, already has 73 organizations as active participants, registering SAF transactions. These organizations include not only airlines but also airline customers, fuel producers and suppliers, and freight forwarders. Participants are located in all corners of the world.

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SAF Matchmaker

- **To facilitate SAF procurement between airlines and SAF producers.**
- **Matches requests for SAF supply with offers.**

Efficiency

- Develop the voluntary market for SAF purchasing.
- Simplify SAF procurement by connecting parties without additional fees.

Connectivity

- Find a match – pursue the trade outside the platform.

Visibility

- Volumes, feedstock, location, technology, production, emissions reductions, compliance with CORSIA or EU RED.

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IATA will soon be launching the SAF Matchmaker. This platform will connect SAF suppliers with airlines, creating a marketplace to increase transparency and liquidity in the global SAF market.

We will continue to analyze where the bottlenecks are and alleviate them wherever we can, together with our partners in the value chain.
In that vein, we now turn to our analysis of the current and likely future state of global SAF production.

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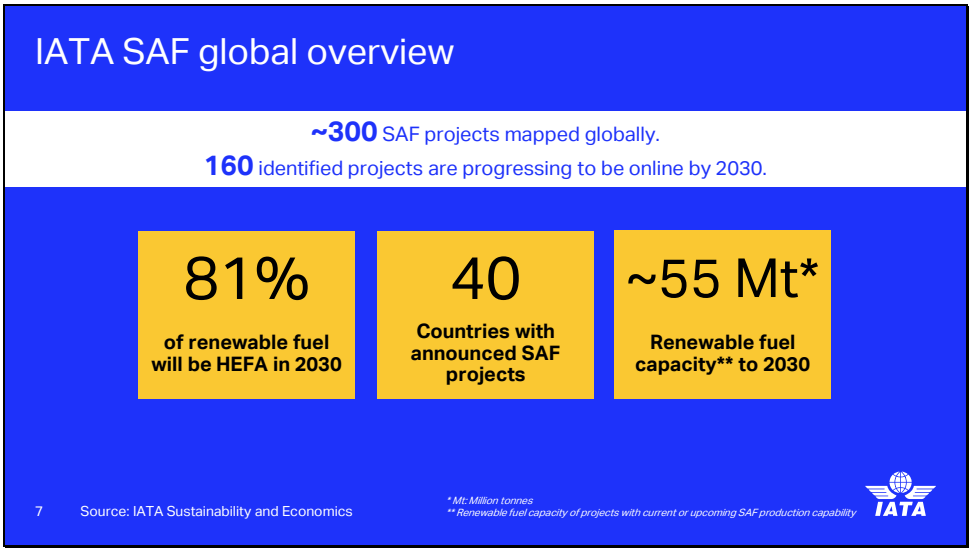

SAF is one of the key enablers for air transport's net zero commitments, and its production must be accelerated.
At IATA, we have been tracking SAF projects around the globe in terms of their progress and potential to produce SAF. With a structured and rigorous methodology, we mapped around 300 renewable fuel projects globally in terms of their feedstocks, technology, their schedules, and ability to produce SAF in the overall product basket.

- We certainly see an increasing number of projects, mostly around HEFA (Hydrotreated Esters and Fatty Acids) and PtL (Power to liquid); however, around 50% of these projects are either announced or in early stages.
- In terms of regional distribution, out of 55 Mt, the US leads with more than 35% share of renewable fuel capacity available in the country, followed by around 22% capacity in Europe.
- The outlook has not changed much from our year-end update, and HEFA continues to dominate the market with an 81% share of renewable fuel.

All the projects included in this slides aim to be online by 2030 to meet the aviation demand, and the policies will play a key role in supporting their deployment.

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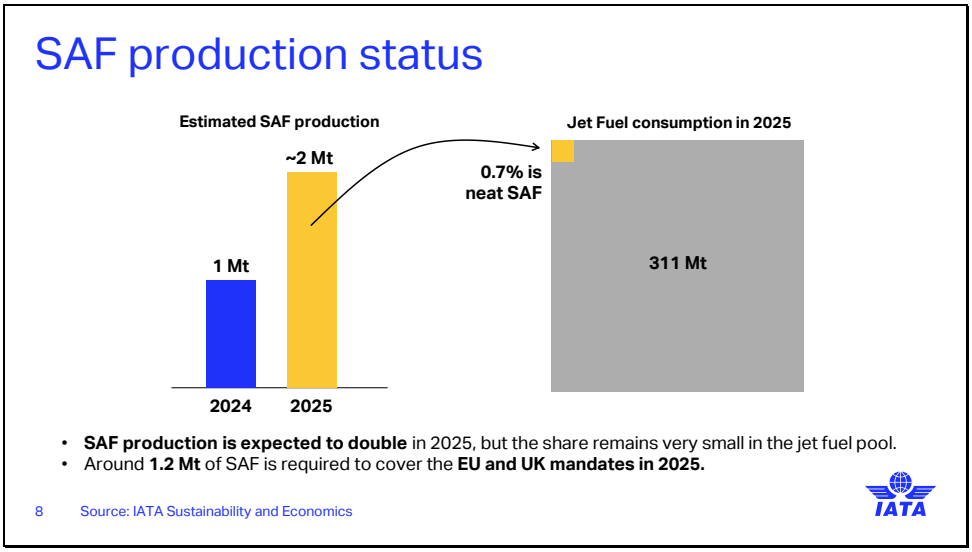

On a positive note, we foresee that SAF production is on track to meet the expected volume of around 2 Mt in 2025. However, we need an exponential increase in their SAF production, given that they are still less than 1% of the total conventional jet fuel demand.

These 2025 SAF estimates take into consideration the following factors;

- New commercial-scale SAF refineries began production in 2025, with more expected to be online later this year. Our analysis shows that the 2025 SAF production estimate is achievable. In fact, in the near term, supply appears sufficient to meet demand, but price is a critical factor.
- Long-term supply growth and new technology scale-up remain uncertain.
- Geopolitical, trade, and policy uncertainty affect both short—and long-term outlooks. Predictable, long-term incentives are essential to enabling investment in new technologies and scaling up SAF production. Policymakers must also ensure that available feedstocks are prioritized for decarbonizing the hard-to-abate aviation sector and that SAF output is maximized in biorefineries.

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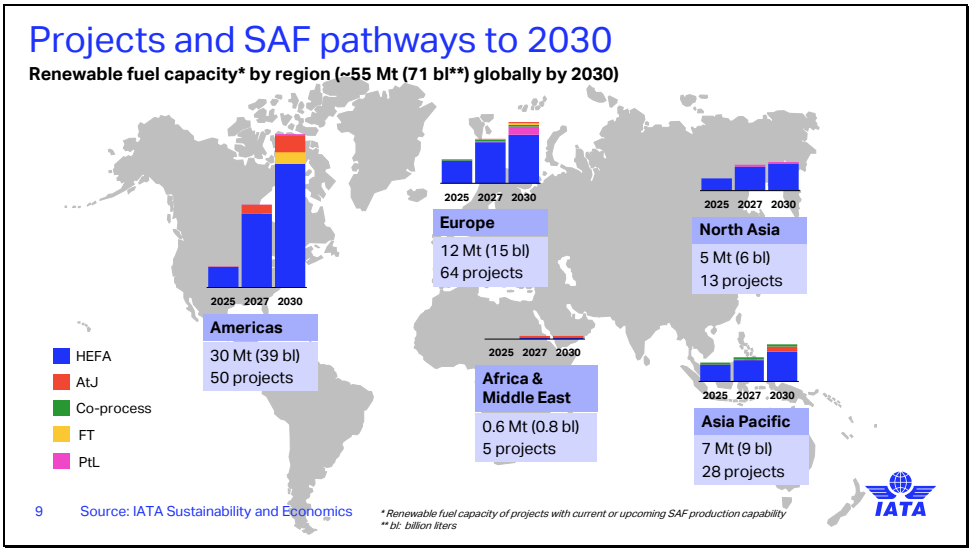

It's important to reiterate that feedstock and technology diversification are imperative to amplify SAF production volumes. We must act now with policy support; otherwise, we will continue to witness a stark difference in technology adoption.

- The Americas emerged as the biggest player on the global map, supported by incentives. The continuation of incentives around feedstocks, carbon intensity, and hydrogen will help to maintain the momentum.
- Africa & the Middle East, and Asia have abundant low-cost feedstocks and strong aviation growth, but are constrained by undeveloped feedstock supply chains, technology access, financing, and current policy priorities.
- In India, we see some announcements at an early stage, and co-processing is expected to enable SAF availability.
- (North Asia) China: China's production capacity can be a great swing factor in the global HEFA-based SAF supply. Importantly, the country is progressing with PtL projects, which, if successfully deployed at scale, can be a game changer given its renewable success story.
- Africa and the Middle East: With technology collaboration, financing, and policies, these regions can play an important role in boosting SAF supplies.
- Europe: We noticed a surge in PtL SAF project announcements in the region, driven by Mandates. Unquestionably, EU incentives encouraged innovation, but it's not enough to build commercial-scale SAF plants based on capital-intensive new technologies.

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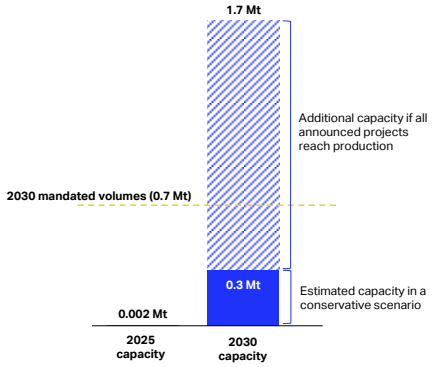
Power-to-Liquid SAF outlook in 2030



- Mandated volumes in the **EU** and the **UK** will account for around **0.7 Mt of PtL in 2030.**
- **Out of 60 PtL projects** scheduled by 2030, 90% are still at the announcement stage.
- **Only 1** commercial-scale **project under construction** in the US (23 Kt capacity).

10 Source: IATA Sustainability and Economics

We are witnessing an impressive growth in the number of announced PtL projects globally that can unlock abundant CO2 feedstock potential.
With a 20% share in the global SAF project portfolio (by number of projects, 4% by volume), the growth in PtL projects is mainly driven by mandates in the EU and UK and policy focus in some countries, like the UAE.
Among the PtL projects to be online by 2030, ~68% (90% by volume) of them are still at the announcement stage (including those under preliminary discussion).

To give an idea of volumes, Industry will require 30 eSAF projects with similar capacity to the Infinium Roadrunner to meet the 2030 mandated volumes.
Policy support for prioritization for project financing and renewable power access (not just mandates) is critical at this juncture to make meaningful progress.

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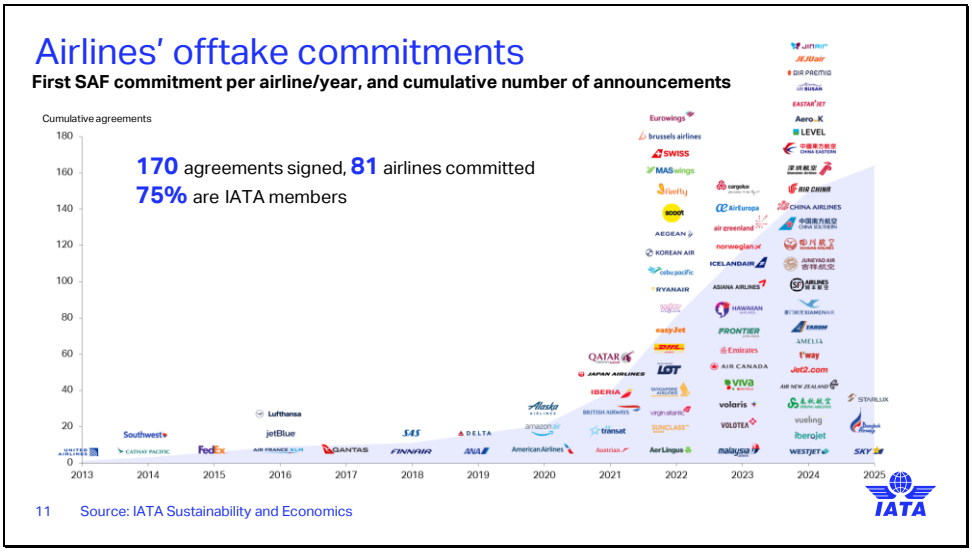

Airlines have continued to progress on securing offtakes for SAF, this is important in boosting SAF production and scale up of new pathways

Long-term offtake agreements are essential to enable and de-risk SAF projects, secure funding, and drive progress.

However, committing to such agreements with first-of-a-kind (FOAK) facilities still poses a significant price risk for airlines.

Policy mechanisms are needed to help share this risk burden.

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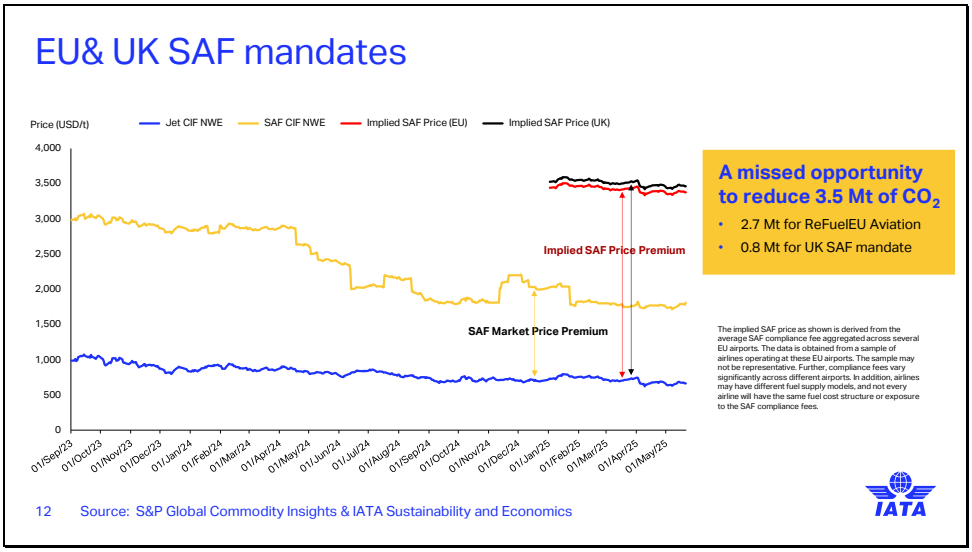

While we are all focused on SAF production and facilitating a functioning SAF market, we are now seeing a major impediment developing through the EU mandates

- The ReFuelEU and UK SAF mandates came into effect in January 2025. They require suppliers to ensure that an average 2% of SAF is contained in the jet fuel uplifted at European airports. Most fuel suppliers have chosen to pass on their cost of compliance with the legislation to airlines by charging a "compliance fee" that is added to each tonne of fossil jet fuel purchased.
- While a fair compliance fee based on the equivalent cost of procuring SAF in the market could be justified, the fees being imposed on airlines are over twice the prevailing market price premium of SAF.
- To illustrate, for ReFuelEU alone, airlines are due to face an additional USD 1.3 billion during 2025 in excess surcharges from the higher compliance fees. This amount could purchase an additional 1.2 million tonnes of SAF (average SAF market premium of USD 1,100 per tonne since RFEUA was implemented). That equates to a missed opportunity of 2.7 million tonnes of CO_2 reduction annually.
- Similar issues exist with the UK SAF mandate. In fact, the impact of the compliance fees in the UK is even higher, effectively foregoing a further 0.8 million tonnes of CO2 reduction.
- Paying more to abate less is unacceptable.

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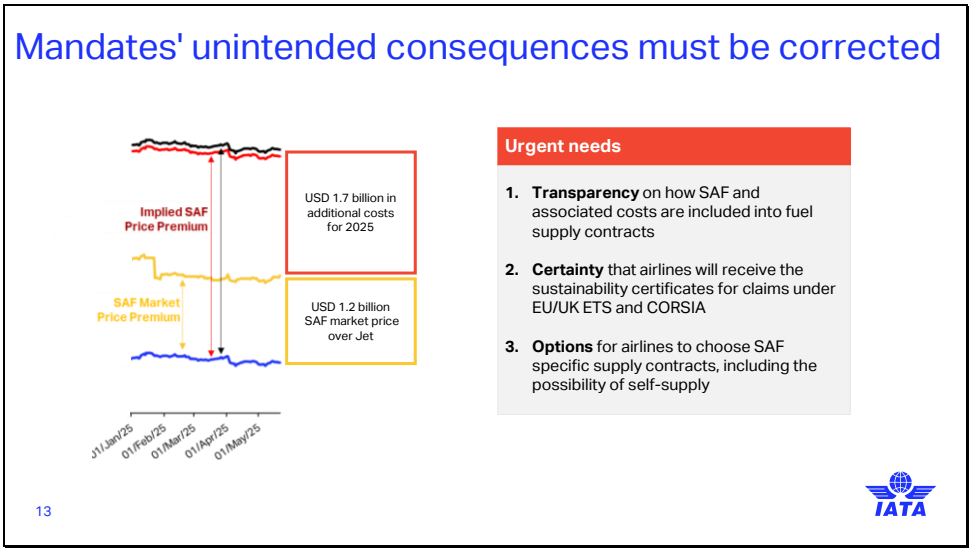

To explain in terms of financial impact:

Looking at both the ReFuelEU and UK mandates:

For the expected [just over] 1 Mt of SAF that will be purchased to meet the European mandates, the expected cost at current market prices is $1.2 billion. Compliance fees are estimated to add an additional USD1.7 billion on top of market prices—this amount that could have instead abated an additional 3.5 million tonnes of carbon emissions.

Instead of promoting the use of SAF, Europe's SAF mandates have made SAF five times more costly than conventional jet fuel.

We need urgent action to resolve this issue and fast:

- Transparency on how SAF and associated costs are including in contract to airlines
- Certainty the airlines will receive documentation for claims under ETS / CORSIA
- Options for airlines to have SAF specific contracts including the ability to self supply.

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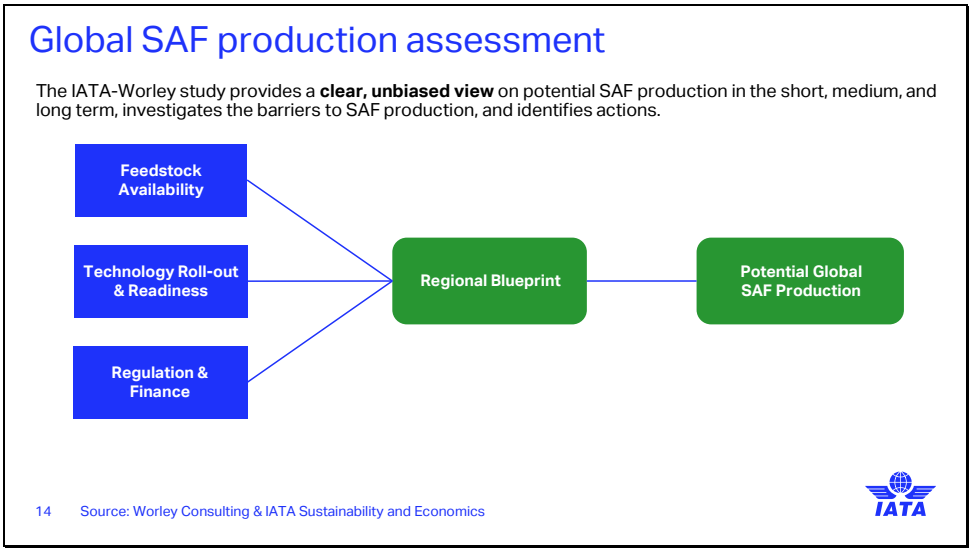

When it comes to accelerating SAF production, sustainable feedstock availability is the central piece for creating an ecosystem.

IATA along with Worley is leading a study to provide a clear perspective on potential SAF production from now through 2050. The assessment focuses on 3 critical pillars that combines a review of local feedstock availability, understanding technology readiness and deployment, and the regulatory and financial landscape to develop a potential blueprint for each region across the globe.

Through this regional blue print we looked for the enablers required for:

- Unlocking domestic feedstock availability and setting preferred SAF technology routes
- Understanding the regional challenges regarding infrastructure and scalability,

Based on our assessment of potential feedstock availability; the most suitable SAF production routes, and regional challenges, a SAF forecast was created for each region.

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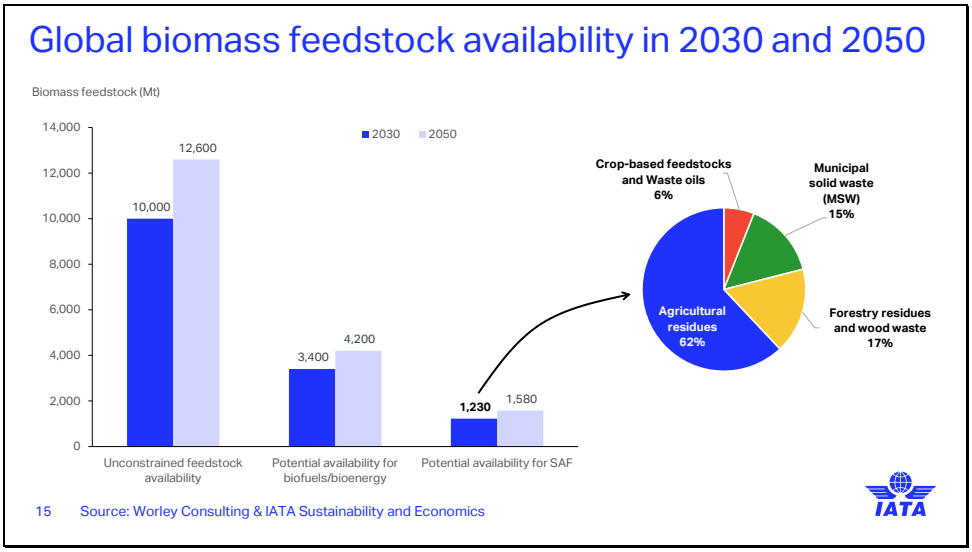

This evaluation provides a realistic understanding of the feedstock that can be viably utilized for SAF production.

It starts from looking at unconstrained feedstock potential across regions, and then looking at what demand for the feedstock would be required for other sectors.

If demand for biomass feedstocks from other bioenergy and biofuel industries is less than expected, or if feedstock is prioritized for the SAF industry, the potential SAF production could be even higher.

But already, the good news is we are able to forecast sufficient volume of feedstock availability for SAF.

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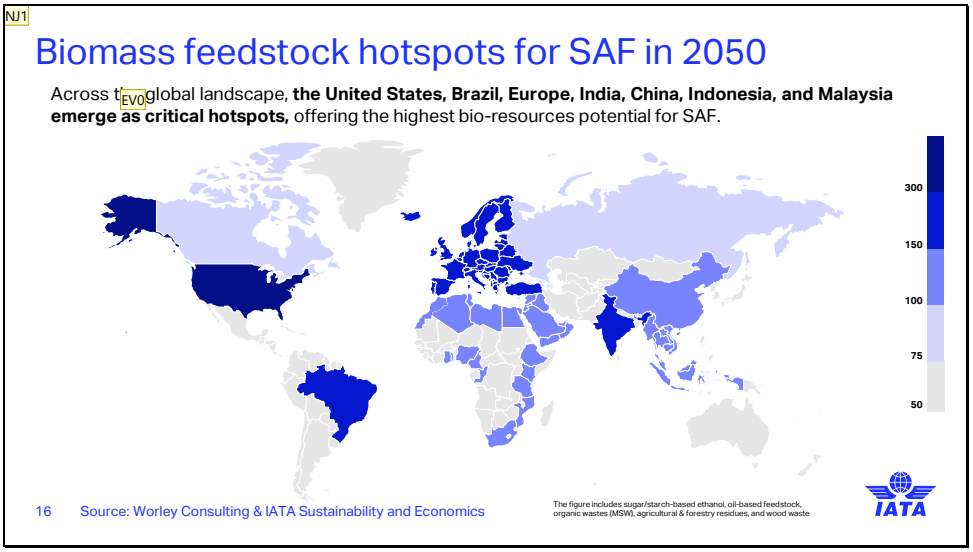

Across the global landscape the United States, Brazil, Europe, India, China, and Indonesia emerge as critical hotspots, offering the highest bio-resources potential.

Unlocking complex set of logistics, infrastructure, and systemic challenges for waste and residues to fully utilize the wide range of SAF feedstocks could enable over 1 Bn tonnes of SAF feedstock .

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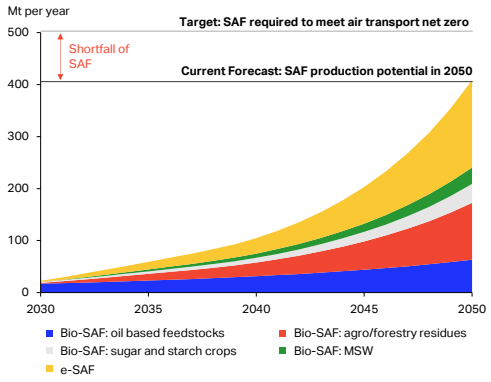
Global SAF production potential constrained by technology rollout



- **Sufficient sustainable feedstock** exists for 500 Mt of SAF by 2050 to meet net zero target.
- The SAF output is expected to be ~400 Mt, due to **constrained technology rollout**.
- **Policy support** for technology acceleration is critical.

17 Source: Worley Consulting & IATA Sustainability and Economics

IATA

What we are starting to see is:

There is sufficient feedstock availability to meet aviation's net zero needs – without interrupting transition paths for other sectors.

However, based on current progress, SAF production output likely to be constrained because of the issues regarding technology roll-out, This is driven by shortfalls we are seeing in technology maturity and the ability to scale production facilities.

This is where governments can best help. Supporting technology development, scaling for commercialization.

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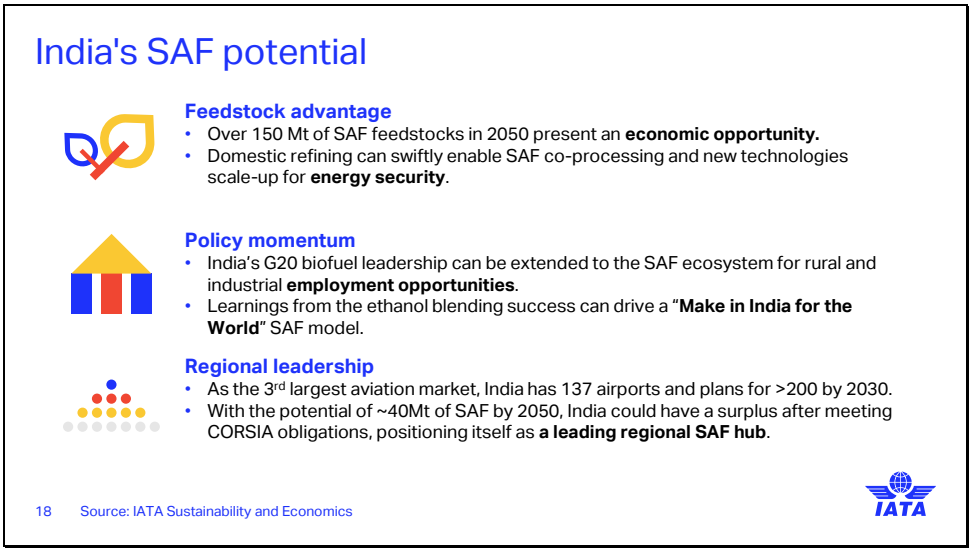

India's leadership in biofuels is exemplary, with policy support making it the world's third-largest producer of ethanol. The forward-looking visionary policies in the country with a technology and feedstock-neutral approach are notable.

As one of the feedstock hotspots (with 10% of global biomass feedstock for SAF), it's time for India to rationalize its existing feedstocks for aviation, a hard-to-decarbonize sector, and catalyze its SAF story. Continued policy momentum is crucial to channelizing the country's biomass and waste resources and adopting new technologies through incentives and research-focused grants.

We estimate that the country has the potential to produce around 40 Mt of SAF by 2050. This is a real economic opportunity for rural Indian transformation and to fuel sustainable aviation growth, and it must not be missed.

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