REAP Regional Economic Advancement Partnership

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Sustainable Aviation Fuel

High Altitude Vision

July 10, 2025

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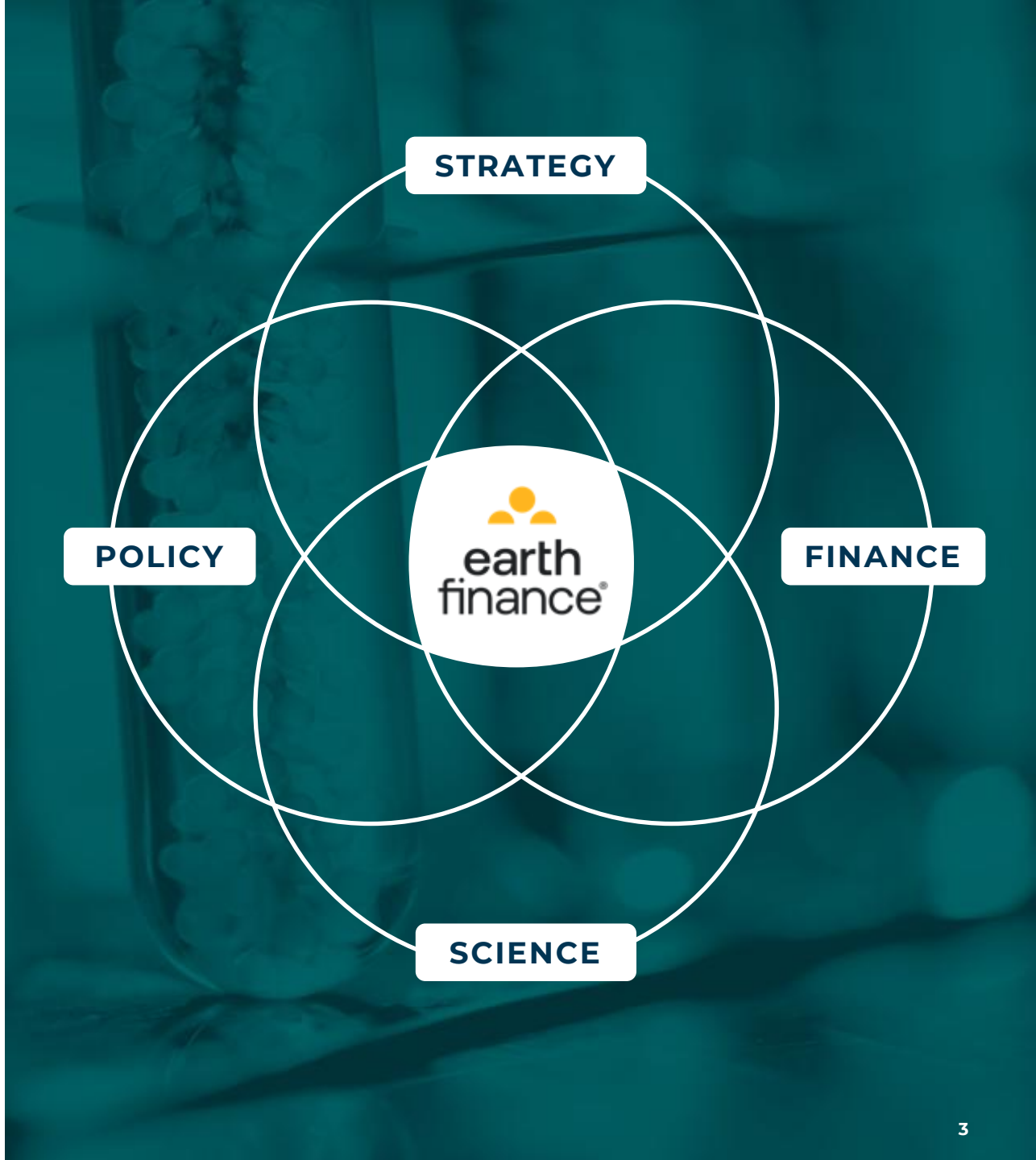
Director & Chief of Staff


earth finance®
The global transition
to a sustainable future.
And how to pay for it.

Our mission is to accelerate the global economic transition to a sustainable future.

We help corporations, investors and policymakers align **market, technology, and policy forces to unleash opportunity** amid global uncertainty.

Our **advisory** and **technology solutions** architect and execute growth strategies that create competitive advantage, build brand value, mitigate risk, capture cost savings, and enhance value chain resiliency.

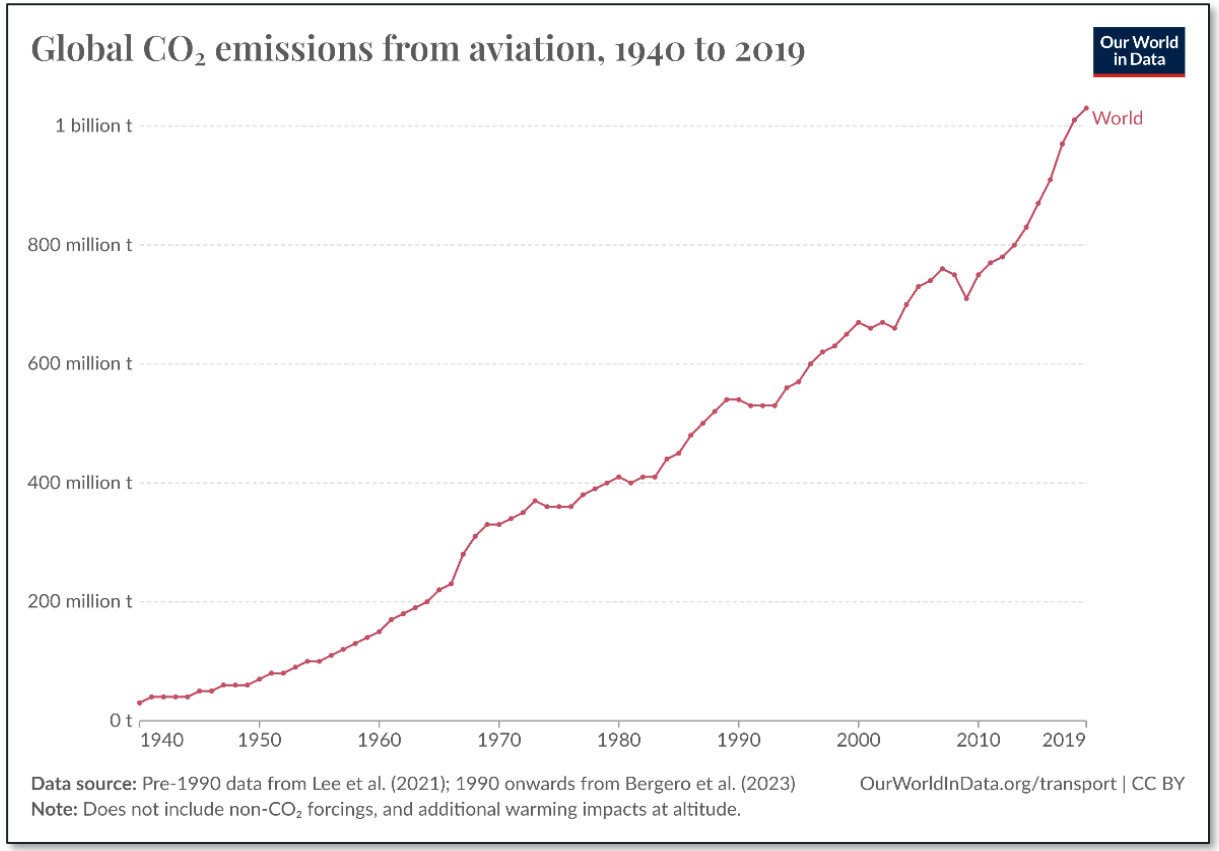


Global Aviation & Impact on Climate

Aviation is responsible for nearly 3% of all global emissions (nearly 950 Mt CO_2), but by 2050 it could account for almost 23% if unmitigated.[1]

- Between 1990 and 2019, both **passenger and freight demand** has approximately **quadrupled**.[1]

  - Despite the advances in technology, aviation's **CO_2 emissions have also quadrupled since 1970** (reflecting booming demand for air travel) far outpacing road and rail growth.[2]



Source:
1 – IEA – Aviation
2 – OurWorldinData – What shares of global emissions come from Aviation?

Sustainable Aviation Fuel (SAF)

A Proven, Scalable Solution for Near-Term Aviation Emissions Reduction

SAF is **made from non-fossil materials** and serves as a **drop-in replacement** for conventional jet fuel (CJF)

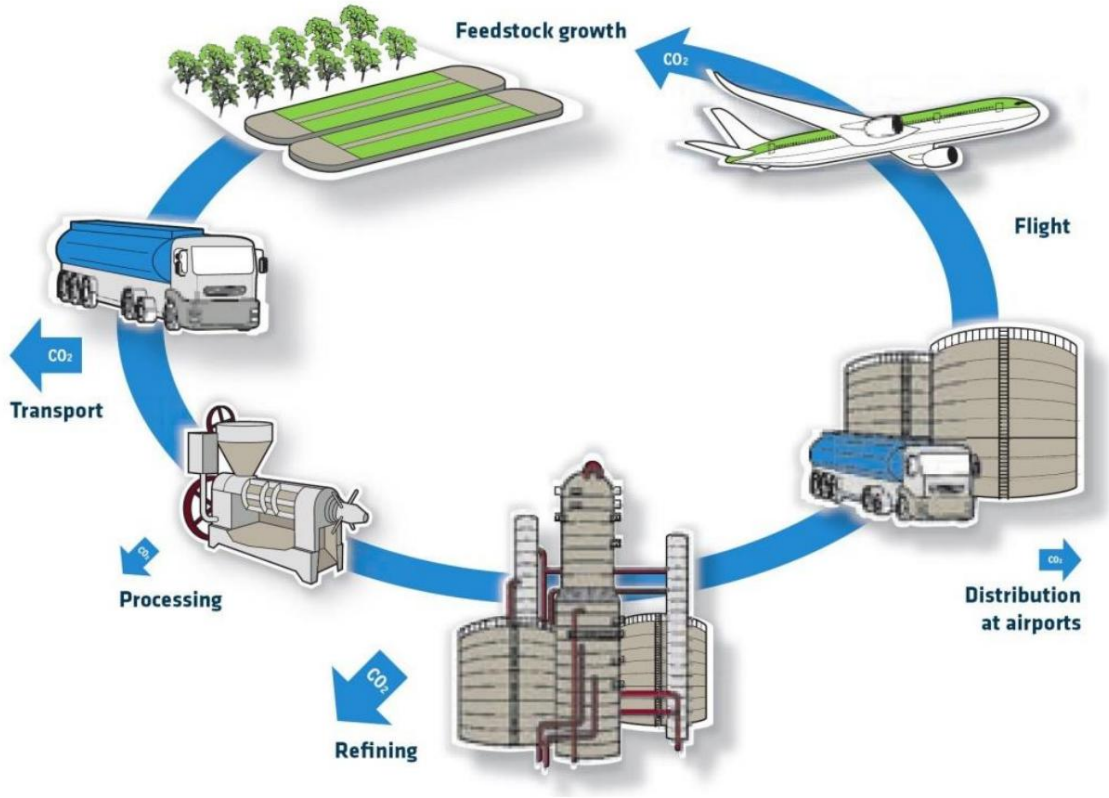
SAF can cut life-cycle emissions by up to 80%, compared to fossil jet fuel.

It **produces less soot and particulate** matter compared to CJF.

- HEFA-derived SAF, even at a 50/50 blend, has been shown to reduce soot emissions by 50–70%.

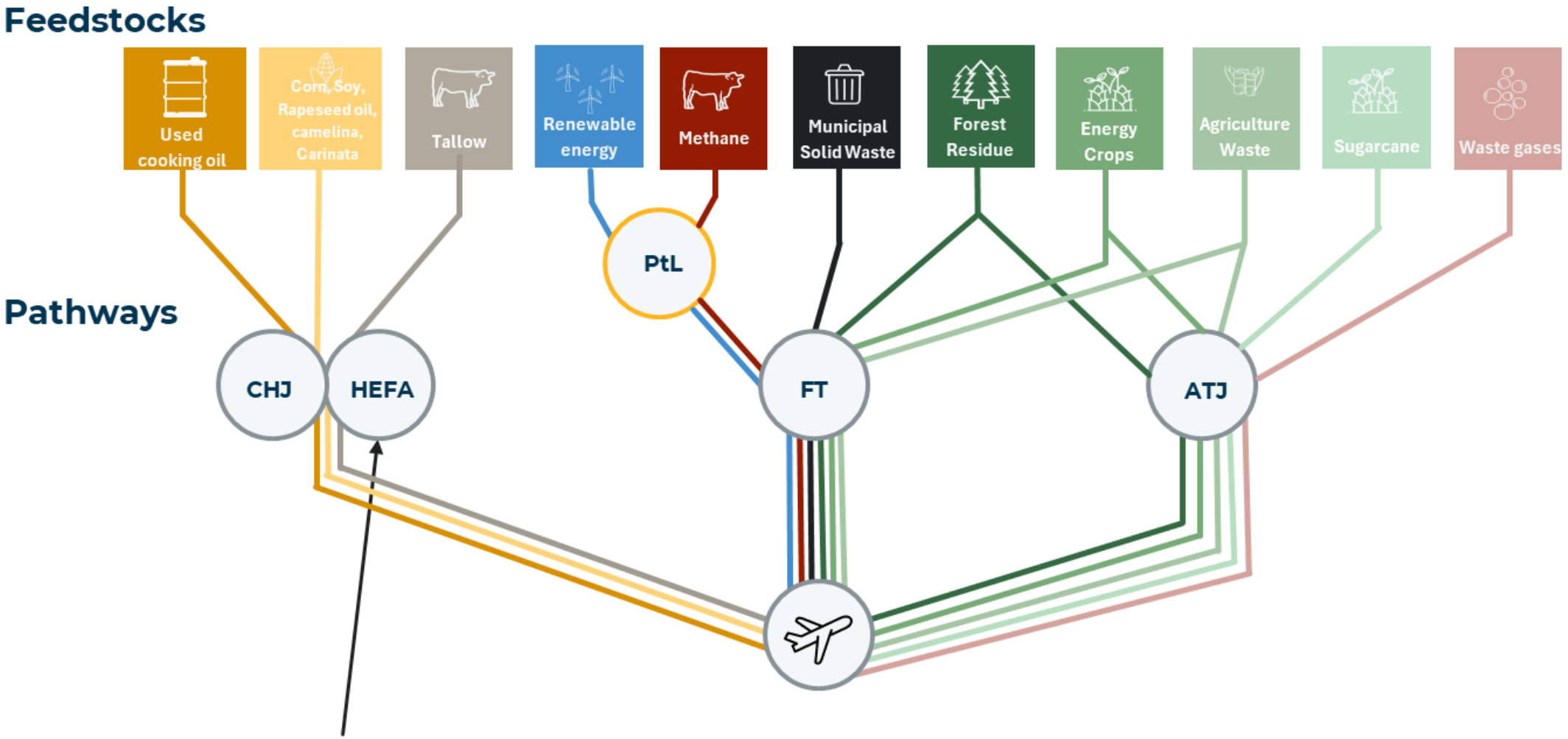
SAF **can be blended, stored, and transported** using current airport systems and infrastructure..

SAF is essential to aviation decarbonization, **especially as carbon offsets face increasing scrutiny** – particularly in private aviation.



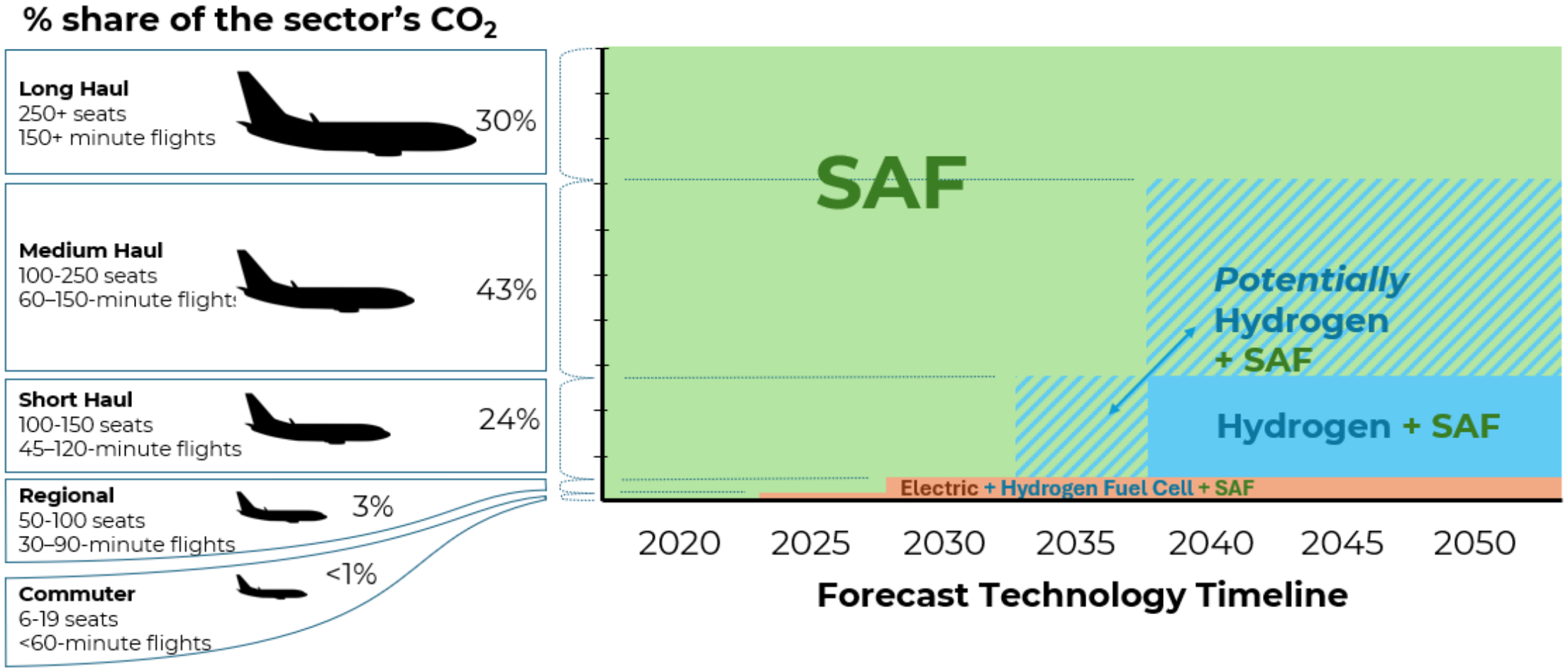
SAF Feedstocks and Pathways

SAF Can Be Made From Many Different Inputs, Through Different Processes



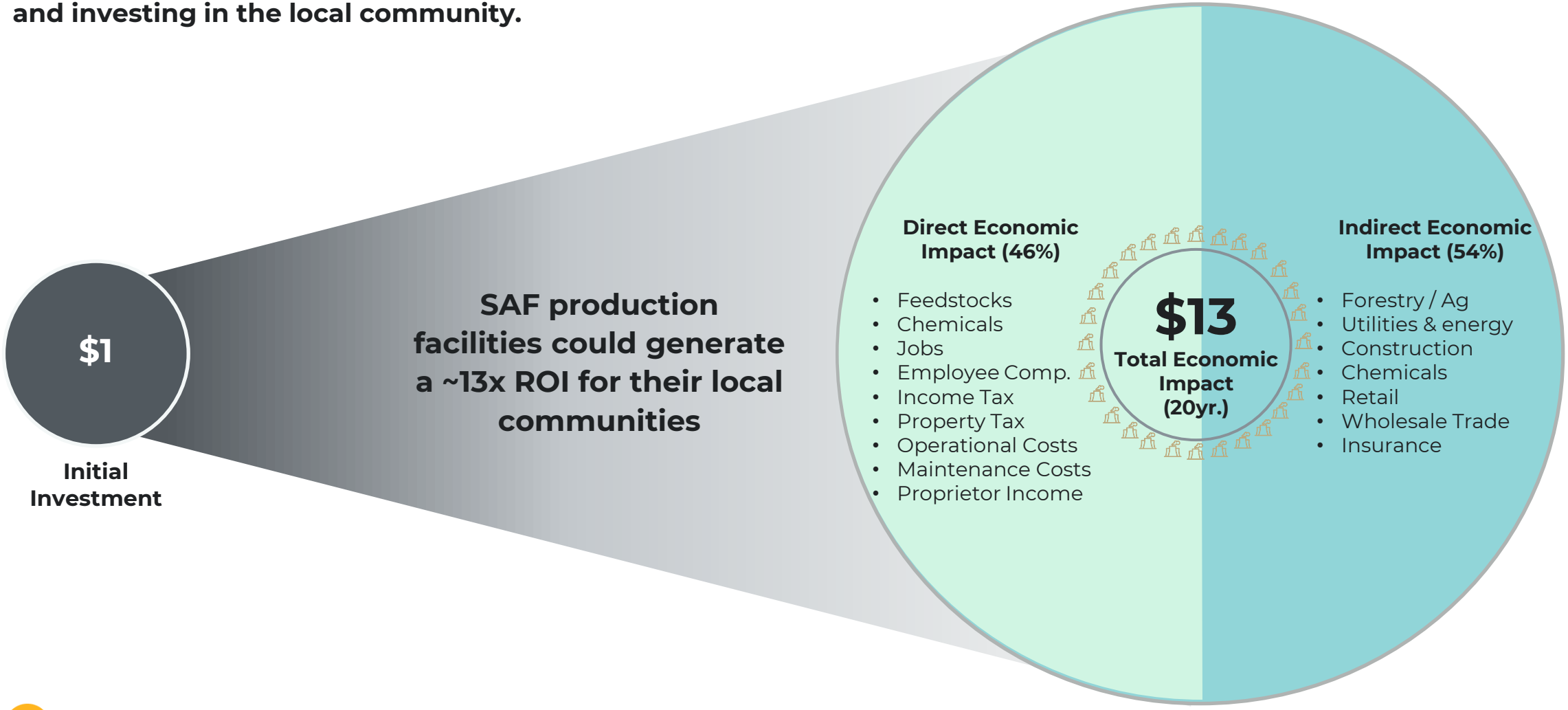
The Criticality of Scaling SAF

Despite the excitement around hydrogen and full-electric propulsion, they are not expected to play a major role (<5%) in reducing emissions before 2050.

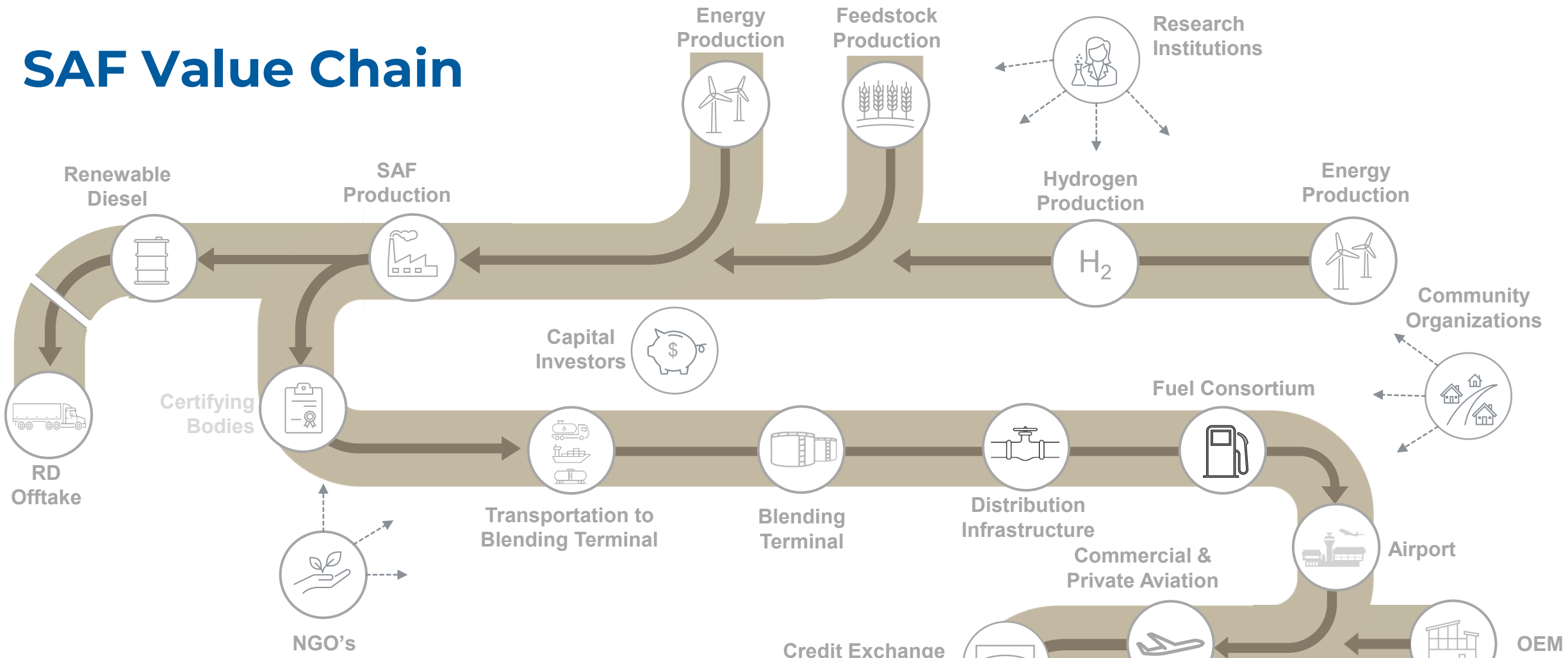


SAF Production Economics

Every $ of investment in SAF production equates to $13 in direct and indirect economic return for the community over a 20-year period. Fuel production can be a regional economic driver while protecting domestic energy security and investing in the local community.



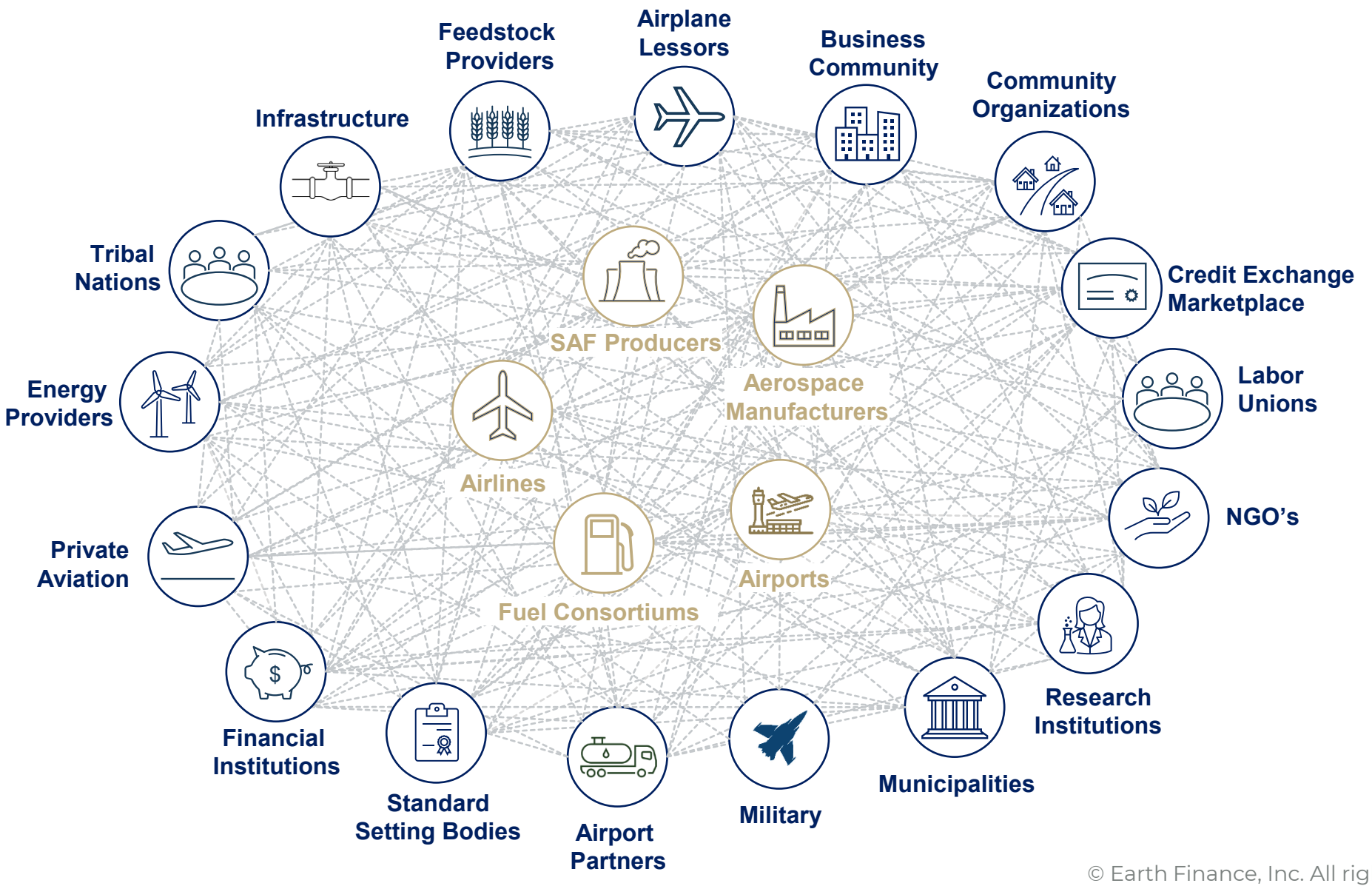
SAF Value Chain



DE-RISKING THE SAF VALUE CHAIN

Successfully scaling the SAF market starts at the beginning of the value chain by supporting the research and development of new, low-cost, higher performing, low-carbon fuels that are commercially viable. However, market interventions are necessary along the entire value chain to address the systems-level challenges facing the SAF transition.

SAF Ecosystem



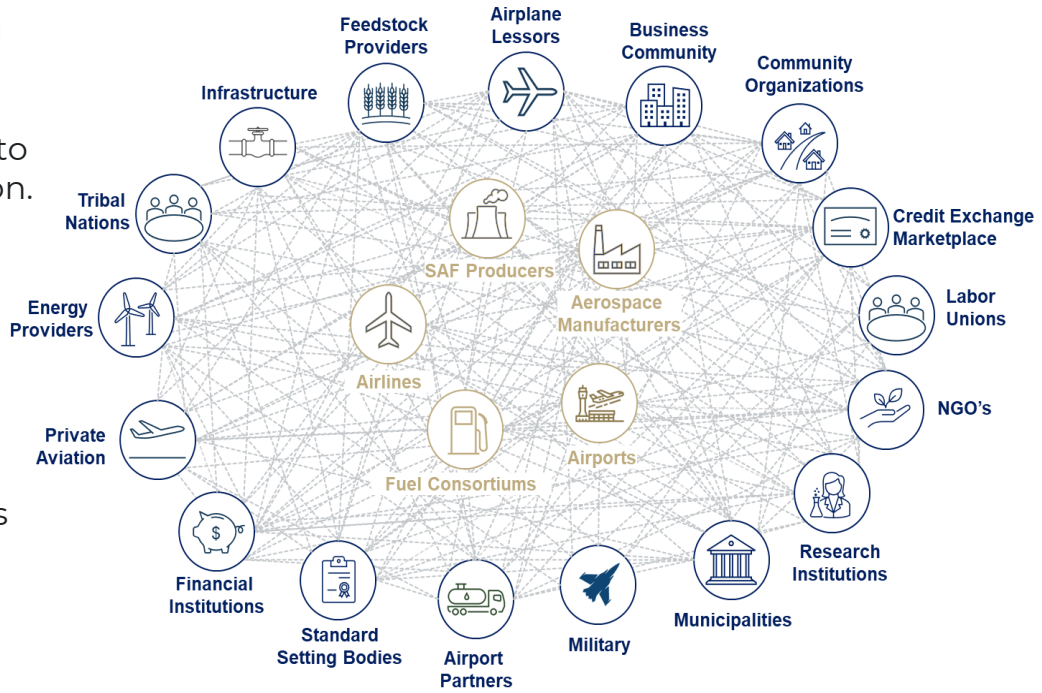
The Pacific Northwest SAF Ecosystem ("Cascadia"): Cross-Industry Collaboration and Innovation at the Systems Level

Activating the Entire SAF Ecosystem

A "Catalytic Community" drives accelerated change, transformation, and quantifiable impact by bringing together a diverse, cross-sector coalition of stakeholders to pool their resources, expertise, and influence to solve systemic-level challenges, resulting in economic, social, and environmental value.

Accelerating the transition to SAF through a Catalytic Community framework:

1. **Coalition:** Build a collaborative ecosystem of multi-industry stakeholders with material economic, social, and environmental interest in the SAF transition.
2. **Regionality:** Identify and leverage the unique regional assets and feedstocks to streamline sustainable SAF production and economic growth across the region.
3. **Public/Private:** Understand the public/private partnerships necessary to accelerate development, adoption, and commercialization of SAF.
4. **De-risk:** Understand barriers to finance and capital that enable coalitions to design solutions that de-risk projects and bring capital to the markets.
5. **Engage:** Local community and Indigenous groups early to inform the systems level solutions that deliver equitable and sustainable economic prosperity.
6. **Inform:** Raise awareness and capacity building across the broader regional landscape and incentivize early engagement and adoption.



Cascadia: Focus Areas to Facilitate Systemic-level Transformation

Accelerated Production & Deployment of Sustainable Aviation Fuel Across the Pacific Northwest

Policy

Implement or revise policy measures that fast track SAF (and SAF feedstocks) production and deployment.

Feedstock & Energy

Determine the value drivers and enablers of PNW feedstock and New Renewable Energy Projects.

Infrastructure

Evaluate and upgrade infrastructure systems that sustainably transport large volumes of SAF from across the value chain.

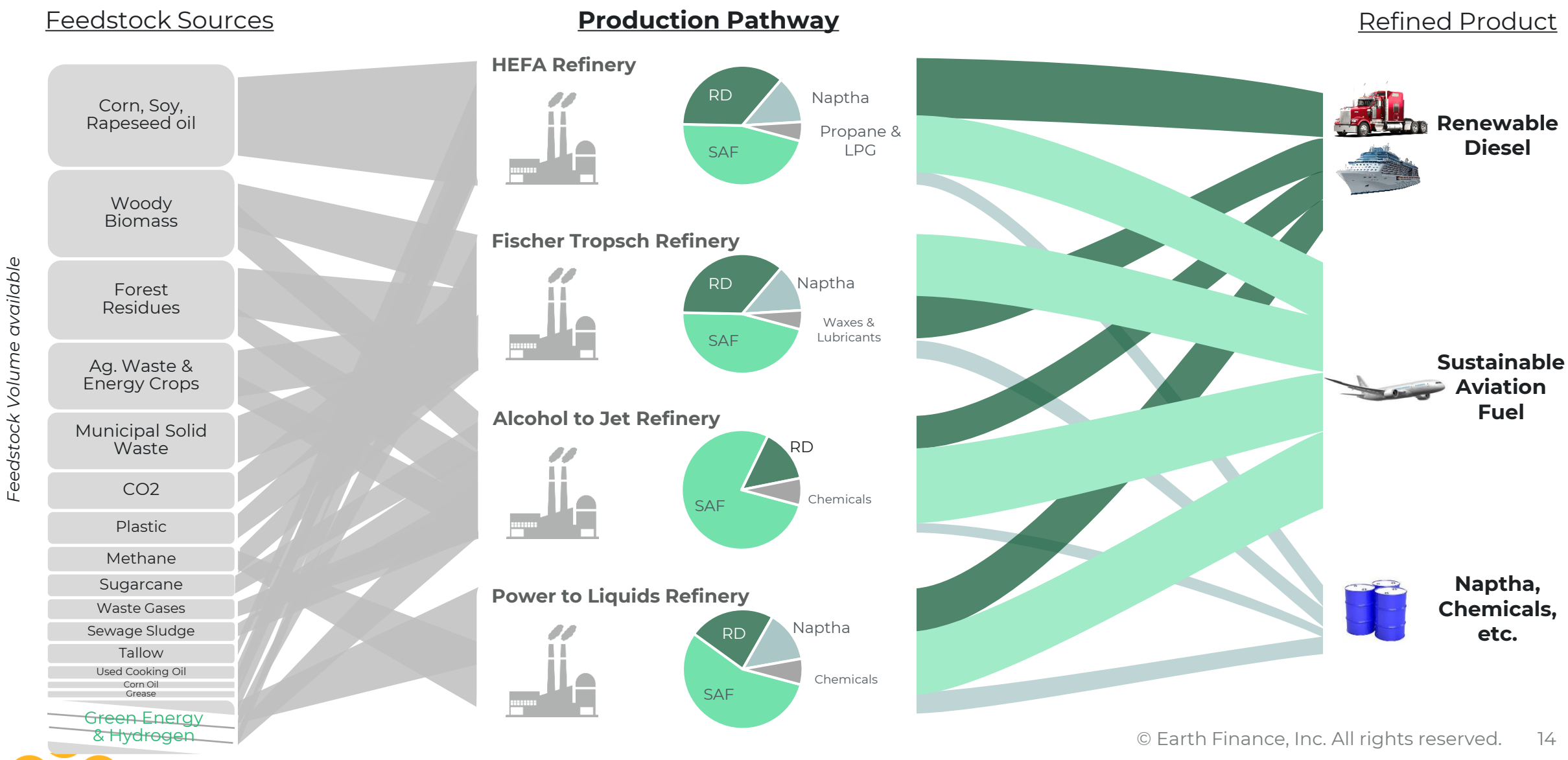
Financing Production & Offtake

Implement innovative, multilateral financial instruments to unlock capital and investment. Drive towards multilateral offtake agreements that scale production volumes.

Research & Development

Rapid prototyping and enhancement of next generation renewable fuels.

SAF Production is Only One Part of it…



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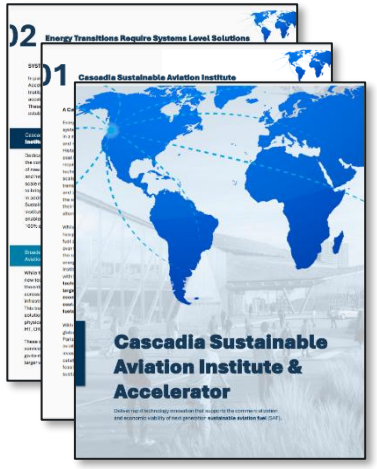
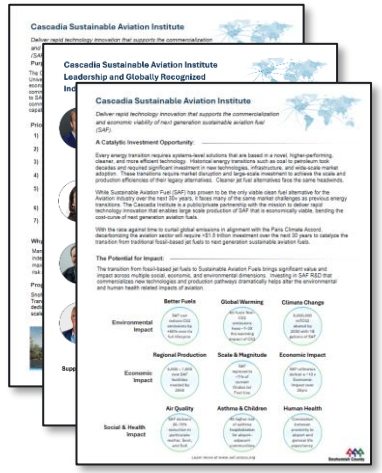
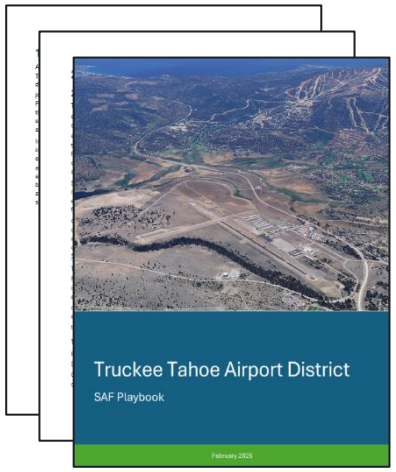
CASCADIA
SUSTAINABLE AVIATION ACCELERATOR



SNOHOMISH COUNTY



TRUCKEE TAHOE AIRPORT



ISLAND SKIES ALLIANCE

Join us on the transition to a sustainable economy.

GET IN TOUCH

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