

# Sound Forestry and Policy

Sustainable Aviation Fuel

November 2025

# State of Play for Sustainable Aviation Fuel (SAF) Exports to the EU from US Woody Biomass

Direct feedback to Hannah Birge ([Hannah.Birge@tnc.org](mailto:Hannah.Birge@tnc.org))  
and John Estess ([John.Estess@tnc.org](mailto:John.Estess@tnc.org))

# Forest residue is one of many inputs ("feedstocks") that can be used to produce **biogenic** Sustainable Aviation Fuel (SAF) and other liquid biofuels.

There is also non-biogenic, synthetic "e-SAF" not shown here.

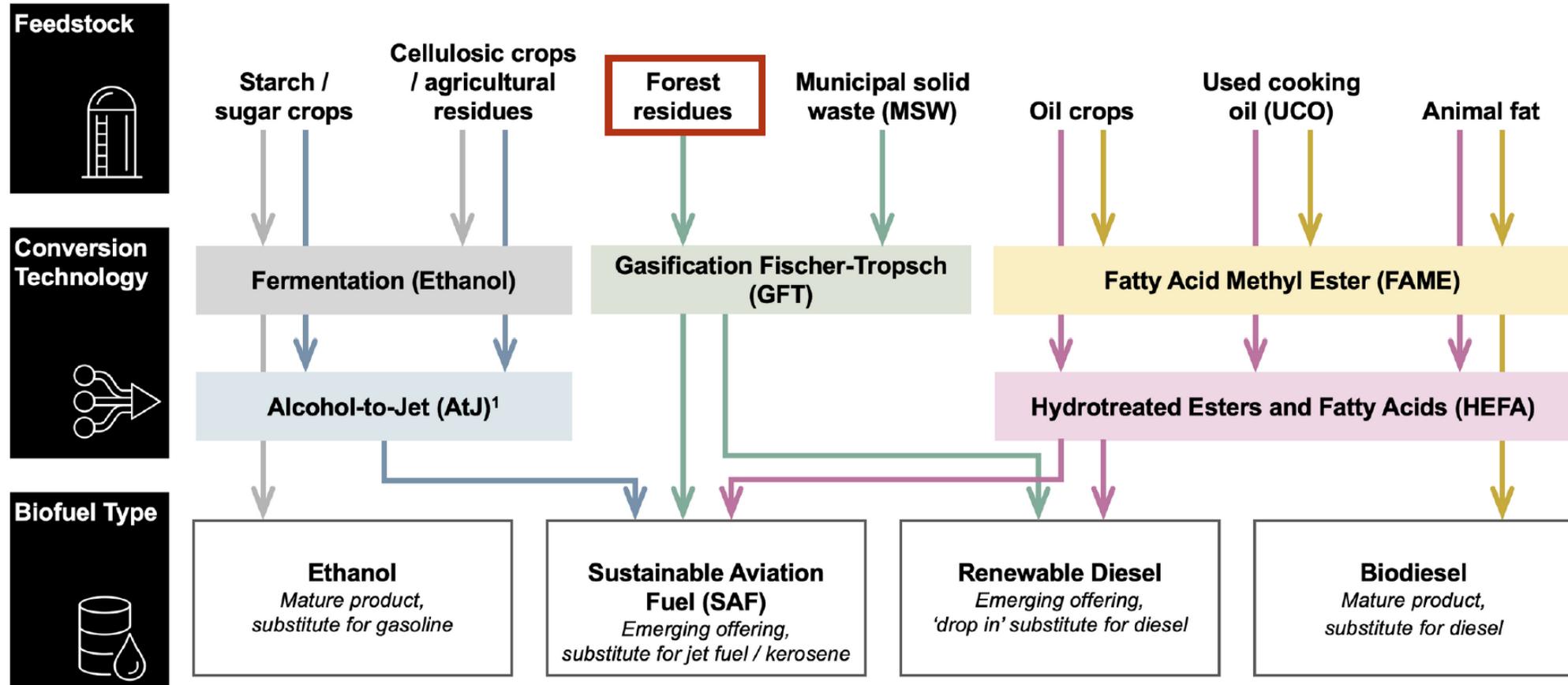


Figure 1. Major biofuel production feedstock and conversion technologies. Colors are used to track the flow of different feedstocks through various conversion technology pathways and into biofuel products. These flows illustrate the partial interchangeability across different feedstocks and pathways. Source: Proprietary Bain and Co. analysis. Shared with TNC fall 2023. Not for external communications. <sup>1</sup>The AtJ pathway also generates a small amount of biodiesel as a byproduct.

# The EU Sustainable Aviation Fuel (SAF) Policy Ecosystem

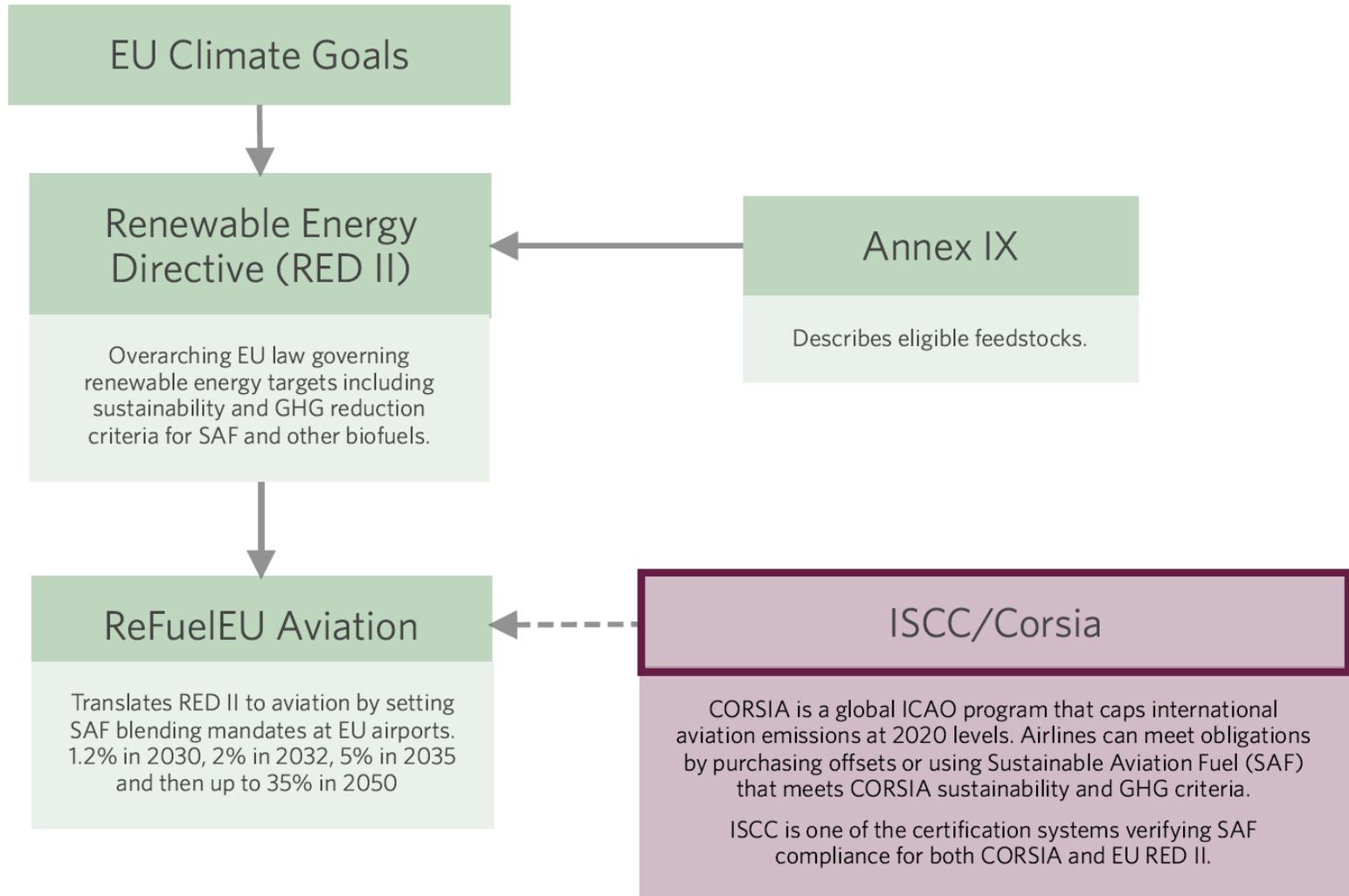
How RED II, ReFuelEU, and certification systems align to describe what "counts" as SAF

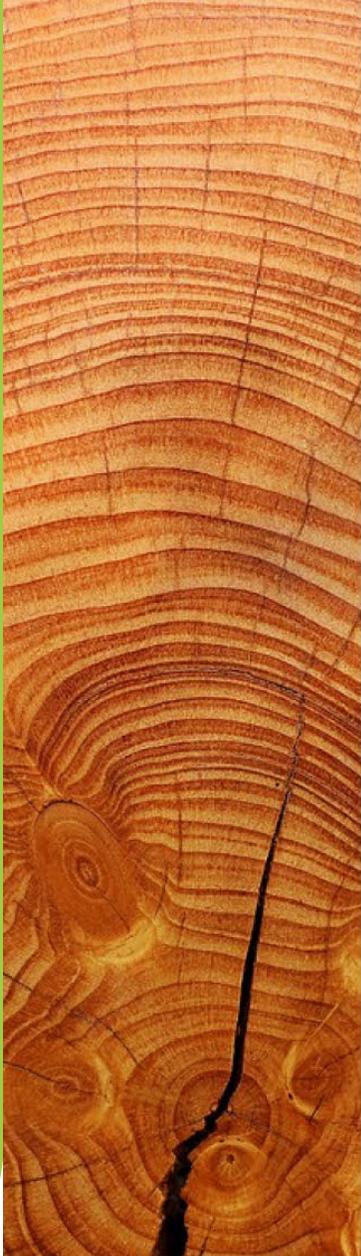
## EU Sustainability Mandate

The EU aims to decarbonize aviation without triggering indirect environmental or social harm.

Criteria go beyond carbon intensity to prohibit land conversion, require traceable waste or residue feedstocks, safeguard soil, water, and biodiversity, and protect labor rights.

These guardrails prevent SAF expansion from undermining food security or ecosystems.





# EU RED II and ReFuel: Considerations for Woody Biomass

**Policy excludes non-waste and non-residue woody biomass from SAF eligibility.**

Whole trees, stumps, high-value logs are excluded from eligibility under RED II and ReFuelEU.

**Forest residues have explicit specifications.**

Eligible only if removal avoids harm to soil carbon, biodiversity, and regeneration capacity.

**EU compliance market is a "short market."**

The EU is deliberately capping cheap feedstocks with unwanted environmental and social impacts in support of advanced feedstocks and synthetic e-SAF.

Goals is to improve the environmental and social co-benefits while giving investors necessary stability to finance feedstock and production build out.

*This presentation is for informational purposes only. It does not represent an endorsement or policy position of The Nature Conservancy.*

# Outstanding questions

Key to address financial and conservation ROI of industry response to RED II and ReFuelEU.



## What is the feedstock supply relative to demand?

How much supply of the feedstock is there? Where is it? How easily is it transported to facilities?

Per the WI bill, facilities must produce aviation biofuel until bond maturity, use at least 80% Wisconsin-sourced woody biomass over five years, and rely on CORSIA-qualified feedstocks like slash and bark.

**Solution:** Feedstock supply assessment study.



## What is the CAPEX ROI for a new production facility?

GFT SAF (what is being discussed in WI) has the lowest, least well known financial ROI for SAF production. EU "short market" incentives could flip this dynamic.

**Solution:** Production facilities economic feasibility studies under various feedstock supply assessment scenarios.



## The EU law is black and white for a grey world. Will it flex to meet its ambitions?

Will lawmakers accept variances that align with intent if not letter of the law?

What happens to edge cases, E.g., intermediate oilseeds, palm residue.

**Solution:** Leverage feedstock supply assessment, facilities feasibility study, and role of a conservation fund to assess EU policy alignment feasibility.

# Questions from Nov 10 meeting

**PROFITABILITY:** Can S.A.F. from wood fiber be cost competitive with traditional oil based fuels?

## **REGULATORY UNCERTAINTY:**

USA: US incentives for SAF increased under IRA and declined in 2025

EU: How stable will EU markets and rules be? How will rules be interpreted?

For EU purposes, can pulp (not just residues) be qualified as a suitable source of biomass? How are forest conversion restrictions and indigenous rights codified?

What changes would loggers need to make in their operations for SAF compatible with EU guidelines? What happens to them if the SAF plant changes or closes?

**COMPETITION:** Would the proposed Hayward plant compete with other current users of the biomass?

**WOOD SUPPLY and FOREST ECOSYSTEMS:** How would the expected biomass total usage at the Hayward plant compare to historical harvest in the area?

How would this affect carbon storage in forest and agricultural soils?

What is the total carbon budget for generation of these fuels from forest products, including production, harvest and shipment to the EU?

# Wheels Up With Wood

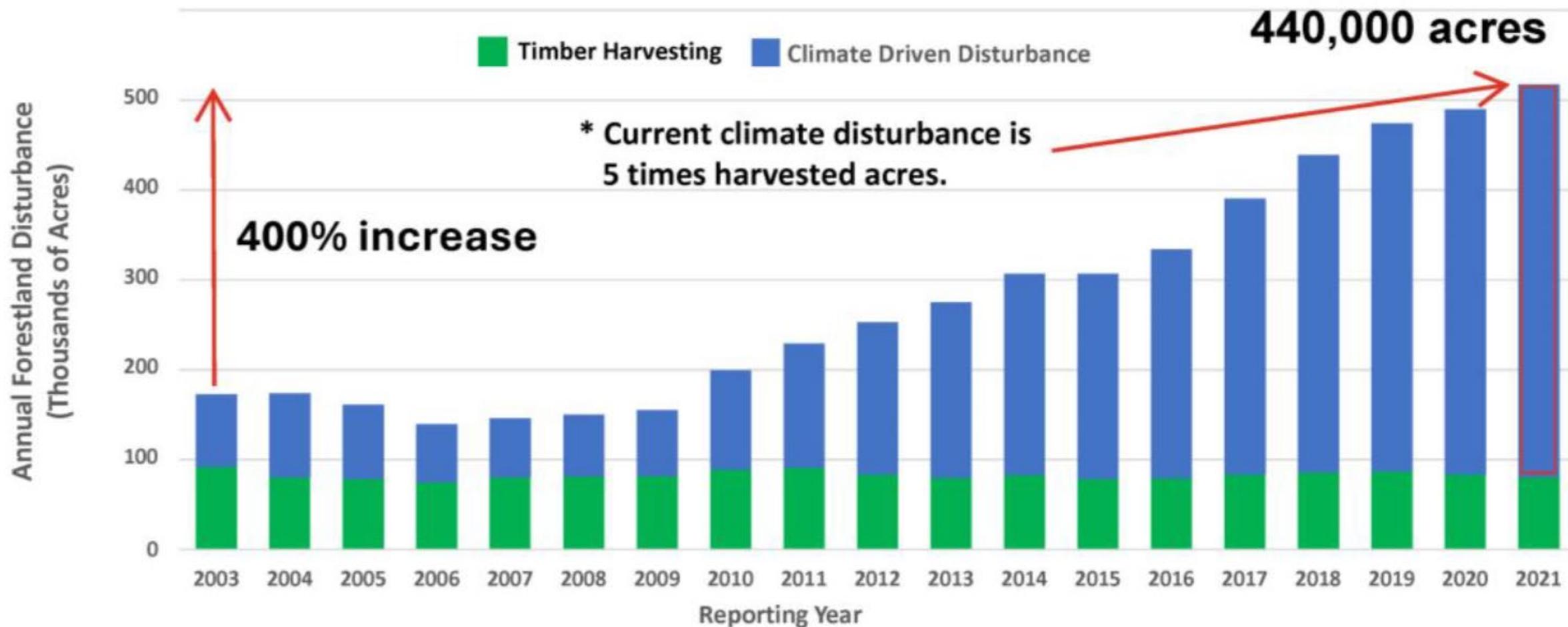
## Advantages of a Forest-Based SAF Feedstock in Minnesota

Sustainable Aviation Fuel Conference  
September 24, 2025

MFRC Executive Director Eric Schenck



# Minnesota Climate Driven Forest Disturbance



5-year average forest disturbance trend in Minnesota (2003 – 2021) associated with climate change (insects, disease, wind, fire, drought, flooding, and extreme weather), and intentional treatment or management of the forest. USDA-FIA 2021 (<https://apps.fs.usda.gov/fiadb-api/evaluator>)

# Sustainable Forest Management Framework



## Forest Management & Timber Harvesting Guidelines

*Educated workforce, annual forester & logger training, implementation monitoring*



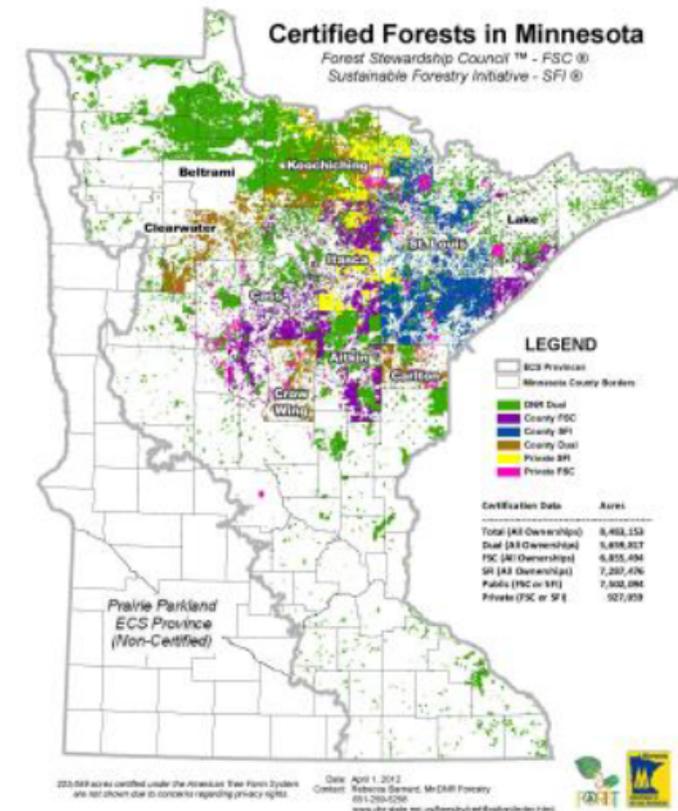
## Sustainable Forest Management Planning

*Statewide, landscape-level, and stand-level planning*



## Private Lands Management & Protection

*Sustainable Forest Incentive Act and easements (>1.6M Acres)*

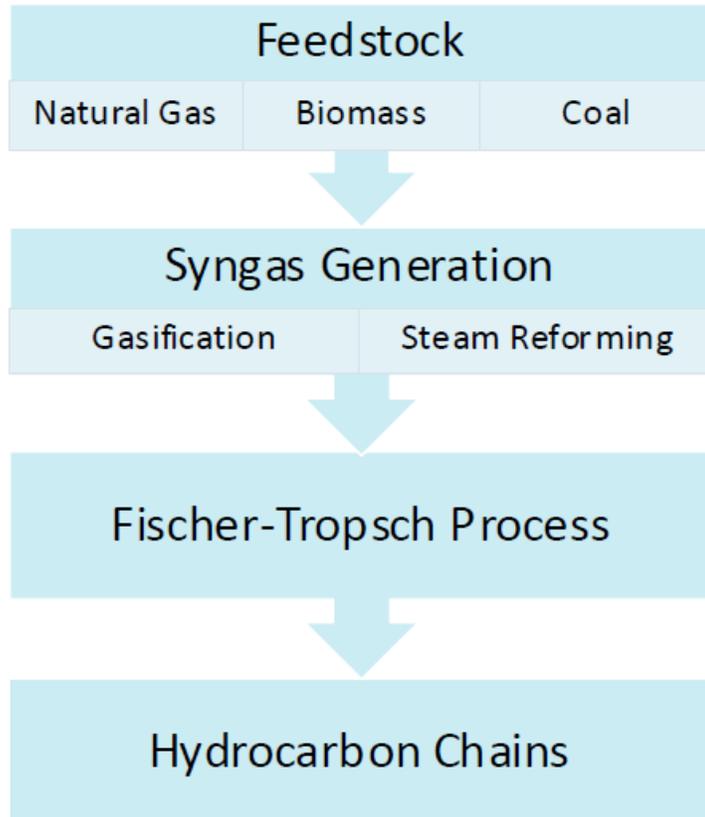


## Forest Management Certifications

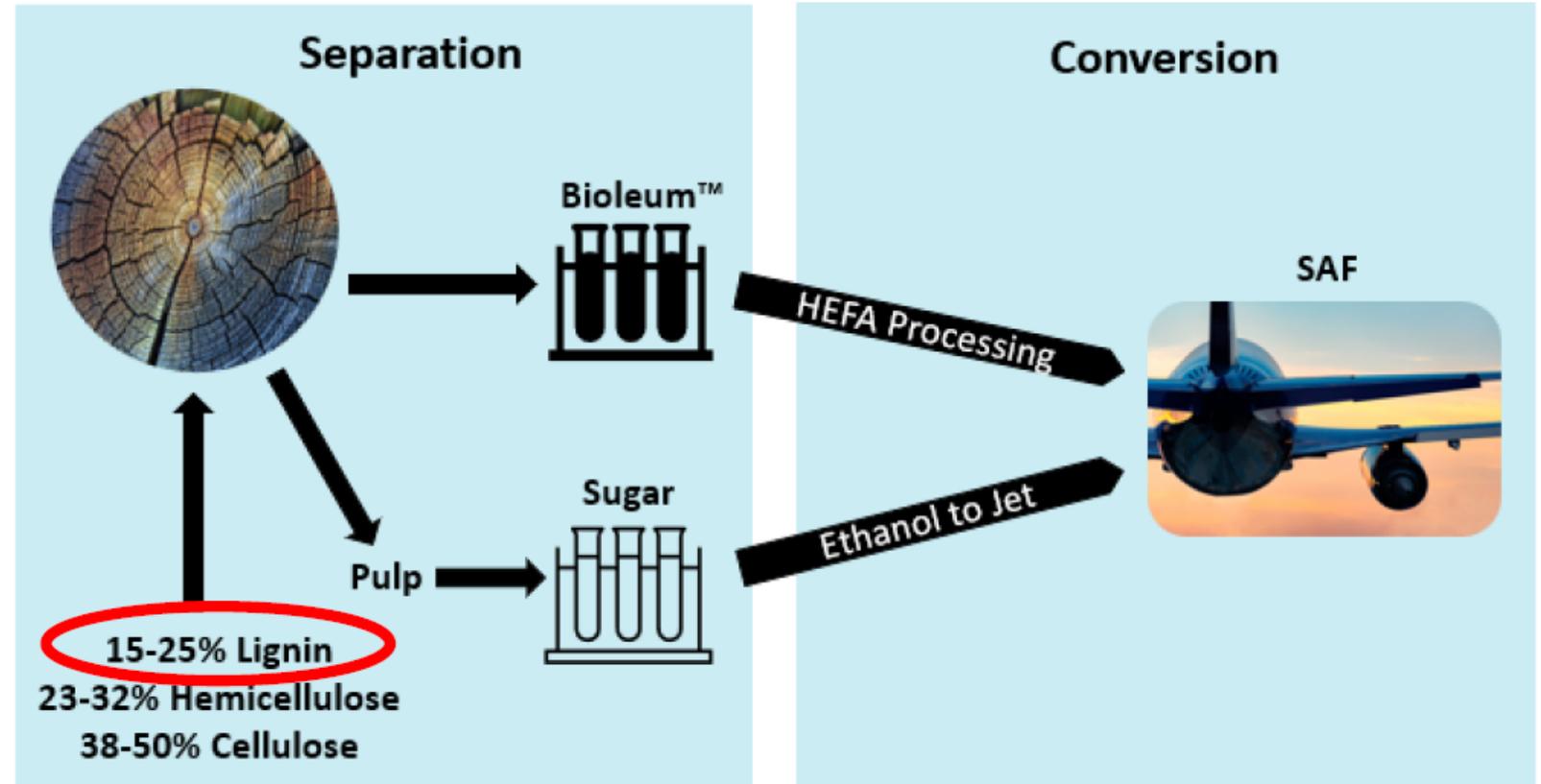
*Nationally recognized leader in 3<sup>rd</sup> party certifications (9.8M Acres)*

# Advancing Technology

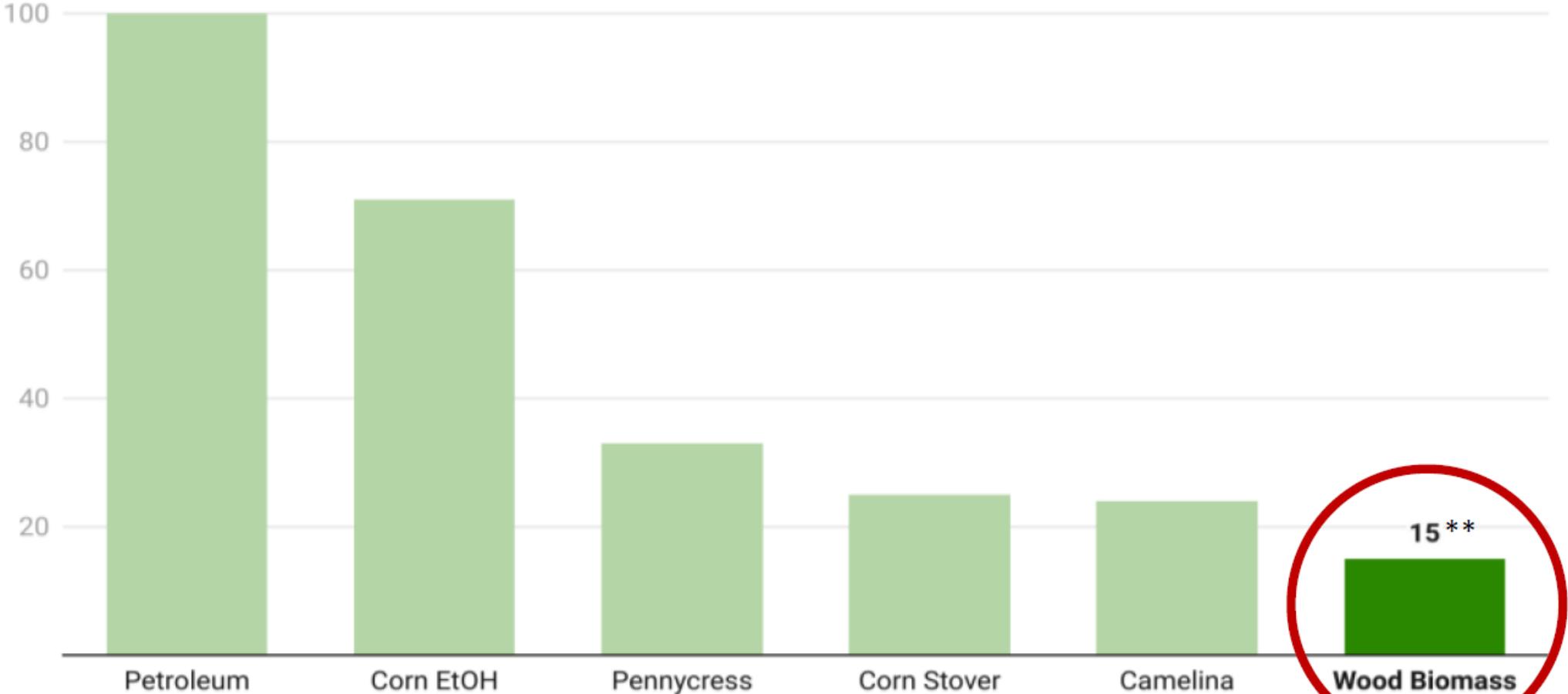
## Cellulosic – Syngas Fischer-Tropsch



## Lignocellulosic – “Bioleum™” HEFA and Ethanol to Jet



# Carbon Intensity Values\*



\*CI scores are illustrative based on ranges of values found in literature. \*\*Wood biomass CI: Comstock May 22, 2025, Shareholder Letter (<https://comstock.inc/press-release/comstock-releases-shareholder-letter-4/>)

## State Tax Credit

- \$1.50/gallon SAF produced and sold in Minnesota

## Proposed Policies

- \$0.02/gallon added SAF credit for each carbon intensity (CI) point below 50
- SAF tax credits extended to 2035
- MN Clean Fuel Standard to reduce transportation fuels CI 100% by 2050

