Forestry Waste to Renewable Diesel & Sustainable Aviation Fuel

CAAFI Virtual Symposium 2021
Nick Andrews, CEO
USA BioEnergy

Learn more at USABioEnergy.com
Developing a Series of Advanced Biorefineries

12 in a Four-State Region

- East Texas
- Louisiana
- Mississippi
- Southern Arkansas

6 Sustainable Aviation Fuel (SAF)
6 Renewable Diesel (RD)
Proven Technologies

Commercially Deployed

Bankable and Insurable

Technology set includes:

• Gasification
• Partial Oxidation
• Fisher-Tropsch Processing & Upgrading
Guaranteed Supply of Feedstock

RFS certified - 50 to 75 mile radius

Wood waste - forest residuals from normal forest maintenance activities

1st & 2nd commercial thinnings helps larger trees grow bigger

Reduced risk of forest fire
CO$_2$ Sequestration

- Prominent NYSE public company
- Renewable power
- Carbon Capture and Sequestration “CCS”
- One of the lowest carbon intensity scores in the industry
- Purchase, own & operate carbon capture, and compression equipment
- Building pipeline to transport CO2 to HUB for permanent sequestration
Leading the Energy Transition

- Deliver over 100 million gallons of SAF into LAX annually
- Equals 2.5 million metric tons of CO$_2$/year
- Reduce GHG emissions of 50 million metric tons of CO$_2$ over a twenty-year period
Sustainable Skies Act makes SAF production feasible

- Potentially gain $1.75 but lose $1.00 Blender’s Credit
- Recognizes increased cost to produce SAF vs RD
- Produces less SAF than RD
- Increased complexity in fuel logistics
First Advanced Biorefinery in Bon Wier, Texas

- Convert woody biomass into 33.0 million gallons/year of RD & naphtha
- Supply the market with drop-in, sustainable, renewable RD fuel
- Fuel is premium, ultra-low sulfur, direct replacement for fossil fuel
- Qualifies for highest levels of RINs and CA-LCFS credits
- Subject to final approval of Texas incentives

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Fuel Characteristics

- Convert wood waste into drop-in RD and/or SAF (+naphtha)
- Chemically identical to petroleum fuels
- Sold through existing infrastructure
- Lower contaminant levels
- Burns cleaner than petroleum derived fuels
World Class Project Team

Decades of Experience

- Capital Structure
- Project Development & Execution
- Technology Selection & Qualification
- Technology Integration & Plant Design
- Petrochemical Plant Operation
- Supply Chain Development
- Transportation Fuel Sales & Marketing
Performance Guarantees

- Full EPC wrap
- Lump sum contract and turnkey solution
- Guaranteed maximum price contract
- Guarantee to build plant through mechanical completion and commissioning
- Performance guarantees from licensors and EPC supplemented by a suite of technology insurance policies
Regulatory Risk Insurance & LCFS Hedging Insurance

Changes in regulatory environment for RINS and/or LCFS Credits

Sharp decline in price of LCFS Credits due to changes in economics of demand & supply
Highly Confident Letter & Proposal

Debt Financing using tax-exempt bonds from co-underwriters Citigroup and Stifel Nicolaus

Amortized over 22 years

Permanent Equity is currently being negotiated
Critical Elements in Place

• Product offtake agreement secured
• Technology set selected
• Integration and detailed engineering completed
• World-class owner’s engineer
• EPC chosen
• Superior plant site
• Agreement to provide O & M
Summer Announcement on Airline Partnership

First Biorefinery - Operation Date Q1 2025

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