CASTLEROCK
BIOFUELS

Northwest Bioenergy Summit, 2024

Jeremy Akers, Managing Director, COO

Introduction to Castlerock Biofuels

In collaboration with Ensyn Corporation (Ensyn), Castlerock Green Energy (CGE) co-founded Castlerock Biofuels LLC (CBF), harnessing exclusive rights to Ensyn's groundbreaking RTP® technology for pivotal applications in the U.S.

Ensyn's RTP® Technology

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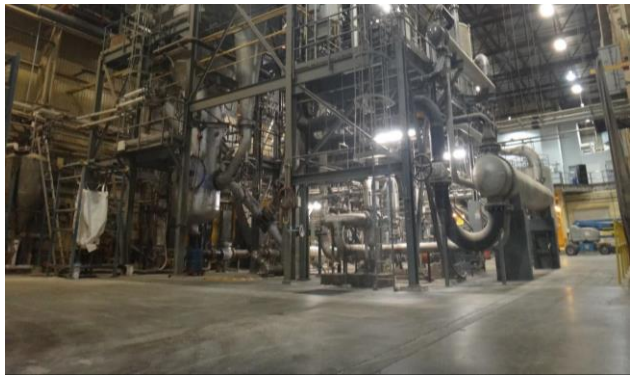
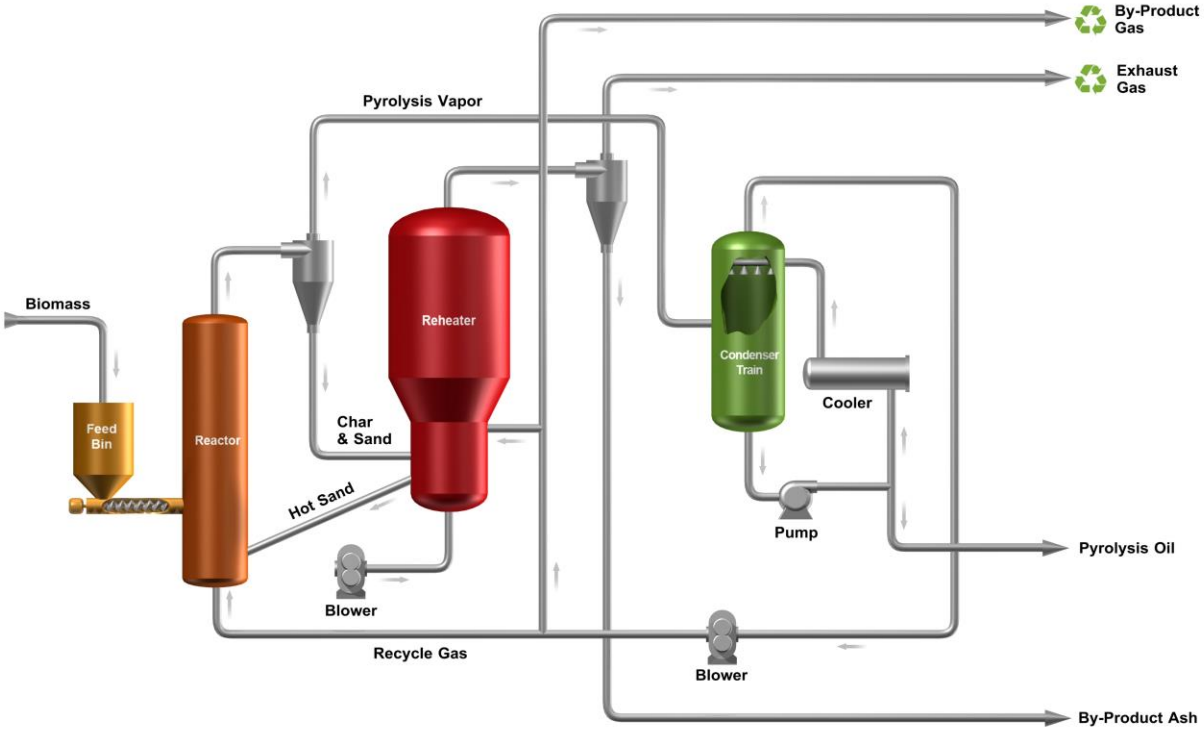
Rapid Thermal Pyrolysis

- Converts solid biomass to high yields of liquid biomass
- Fast thermal conversion – no pressure or catalyst
- Continuous commercial production since 1989
- Proven Technology with a long history of development



Renfrew, Ontario



Port-Cartier, Quebec

Feedstock: Logistics & Procurement

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Slash: treetops, branches, and residuals left post-harvest

- RIN Eligible Feedstock – Compliance with the RFS
- EPA Approved Feedstock Plan for Maine
- 20mm gallons per year RFO Production = 300,000 green tons / 140,000 dry tons
- Feedstock Procurement & Transportation: Maine vs Washington

Feedstock pile in the Katahdin region of Maine

WA Slash pile post harvest

Feedstock dumping and loading

Delivered from in-woods chipping

Offtake Market Overview

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"We strive to make an immediate impact for our clients by providing a renewable product that leverages existing infrastructure and allows them to meet sustainability goals, without significant capital investment."

Renewable Fuel Oil

- Ensyn's RFO® biofuel is a renewable, liquid fuel for heating applications.
- Ensyn has been supplying RFO biofuel on a commercial basis since 2014.
- Using RFO, Operators can lower their greenhouse gas (GHG) emissions by 85 – 90% while leveraging their existing infrastructure.

Biocrude for Co-Processing

- Ensyn's biocrude for co-processing allows refiners to further de-carbonize without big changes to existing refinery infrastructure.
- Biocrude for co-processing is deployed by directly injecting biocrude into a refinery's Fluid Catalytic Cracking Unit (FCC) alongside conventional fossil fuel feedstocks.
- Successfully tested in multiple refineries at up to a 5% blend with traditional fossil fuels. Has shown increased yields.

Project Status: Maine & Washington

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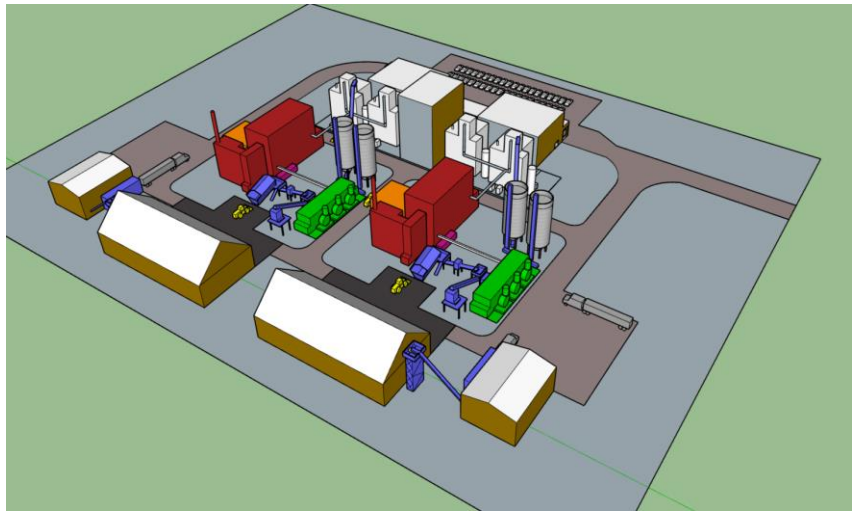
Katahdin Region, Maine:

- Air Permit Approved
- Geotechnical Analysis Complete
- Feedstock LOI's Received
- Term Sheet Received for Offtake
- FEED and FEL-3 Engineering in Process

Western Washington:

- Engaged Harris Group for Initial Siting Study
- Early Feedstock Conversations Underway
- Offtake LOI from Centrio (provided to Ensyn)
- Researching Methods for Slash Removal
- Leveraging Maine Learnings to Accelerate Project Timeline



Concluding Remarks & Next Steps

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Vision for Washington:

- Establish world-class renewable biofuel facility – continuing our momentum from Maine

Next Steps:

- Finalize feedstock study and submit to EPA for approval
- Continue engagement with local stakeholders and regulators

Invitation to Engage

- We actively seek engagement from local communities
- Interest include Research, Workforce Development, Affordable Housing

Jeremy@CastlerockGreenEnergy.com